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THE MARYLAND PHARMACIST

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Association

JAN/FEB/MAR 1976
VOL 52
NO 1-2-3

Pharmacists for the Future Change or Perish.

An Editorial

The Report of the Study Commission on Pharmacy

The Millis Report

Institutional Pharmacy Data For All Pharmacists

Community Pharmacy . . . 1975

An Analysis of 852 community pharmacy operations submitting 1975 data for the preliminary *Lilly Digest* report shows a continuum of increases for most items on the income and expense statement. The perpetual questions facing community pharmacists are those of isolating increases in the expense figures for possible reduction and of determining methods for stimulating income. When the preliminary data, expressed as *percentages of total sales,* are compared with 1974 *Lilly Digest* figures, they indicate that . . .

The cost of goods sold was higher and total expenses repeated a slight decline this year, but the balance tipped in favor of a decline in net profit before taxes, to a level of 3.6 percent of sales.

Total sales achieved new highs, with a record $293,763, an increase of $21,423 (7.87 percent) over 1974 sales. This growth rate compares favorably with the annual growth rate of 5.4 percent over the past decade. Prescription sales again out-performed other sales by posting a 8.64 percent gain as compared with 7.15 percent for other sales, but both areas advanced at a greater pace than in the previous year. During 1975, prescription sales, as a percentage of total sales, achieved a 48.2 percent level, up from 47.9 percent in 1974. The growth and increasing predominance of prescription sales, in relation to other sales, further illustrates the reliance on the prescription department by the average community pharmacy.

With the rise in cost of goods sold (larger percentagewise than the growth in total sales), the gross margin fell to 35.6 percent of sales, which represents the lowest level since 1959.

Total operating expenses went up by $6,519 (7.46 percent), but, *as a percentage of sales,* they dropped slightly, to 32.0 percent. Employees' wages also increased dollarwise, but this expense category declined again to a level of 11.4 percent of sales in 1975. The average proprietor's salary increased $1,191 (5.34 percent), but total income (salary plus net profit, before taxes) fell from the 1974 figure of 11.9 percent of sales to 11.6 percent.

The inventory level rose in total dollars but decreased slightly as a percentage of sales. The sales productivity of the prescription department inventory reached a new high of $8.33 per stock dollar (1.17 percent increase), and other merchandise produced $4.73 per dollar invested in inventory (1.1 percent gain).

New prescriptions continued to achieve a larger share of the total number of prescriptions filled. They accounted for 47.2 percent of all prescriptions dispensed (up from 46.3 percent in 1974), which provided a growth of 4.65 percent. Total prescriptions dispensed increased by 768, to an annual figure of 27,857. This new level of prescription activity amounted to a 2.84 percent gain over the 1974 value. The average prescription charge went up 27 cents during 1975, from $4.81 to $5.08 — up 5.6 percent.

New Clinical Pharmacy Reference Published

A compilation of reports on clinical pharmacy practice which have appeared in the *American Journal of Hospital Pharmacy* are now assembled in the *Clinical Pharmacy Sourcebook.* The 400-page *Sourcebook* was prepared by ASHP in cooperation with Publishing Sciences Group. The selected articles cover the following topics: the past, present and future of clinical pharmacy; implementation, administration and evaluation of clinical services; clinical pharmacy services for hospitalized and ambulatory patients; therapeutic considerations; and biopharmaceutics and pharmacokinetics. The book also includes a bibliography of additional readings and a detailed index.

The *Clinical Pharmacy Sourcebook* will be useful to anyone who has an interest in reviewing a selective sample of the literature on clinical pharmacy practice. Copies are available for $20 each from Publishing Sciences Group, Inc., 162 Great Road, Acton, MA 01720.

CPSC Surveys Pharmacy Compliance With Packaging Requirement

The Consumer Product Safety Commission (CPSC) is conducting a survey of consumers in order to determine the degree of compliance by pharmacists with the child-resistant packaging regulation for oral prescription drugs. The door-to-door survey of a representative national sample of households is expected to provide information about the names of pharmacies which are not complying with the requirement and the extent of the problem. The CPSC also hopes that the publicity generated by the program will encourage greater compliance by pharmacies. An incidental aspect of the survey will be improved consumer knowledge of the regulation and the reasoning behind it.

The survey was stimulated by the fact that accidental ingestion of oral prescription drugs by children less than five years old has continued, even after the implementation of the CPSC regulation.

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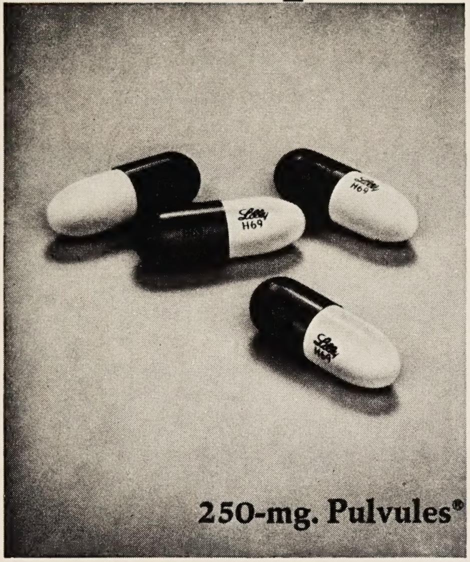

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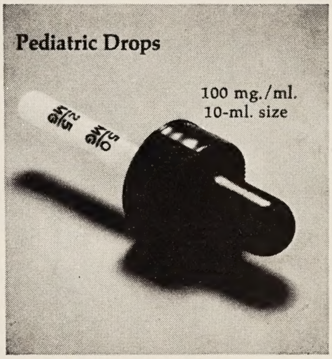

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editorial

PHARMACISTS FOR THE FUTURE — CHANGE OR PERISH

The world of pharmacy has been presented with the "Millis Report"[1] — the first comprehensive study of the practice of pharmacy and the process of pharmacy education since the 1950 "Elliott Survey"[2]. This report addresses itself to the complexities of contemporary pharmacy, attempts to discern the patterns of future development and recommends a series of actions beginning with revisions in the educational foundations which will benefit the profession and result in enhanced health to all through improved drug related services to society.

The "Millis" report not only deserves reading, it is in our opinion required reading for anyone in or out of pharmacy who would have any pretensions to being informed about pharmacy, who wishes to be more effective in his role as a health professional, or who has any pretensions to leadership in the profession of pharmacy.

The profession of pharmacy in Maryland can be proud that the representative of community pharmacy on the study commission was Victor H. Morgenroth, Jr., a past president of the Maryland Pharmaceutical Association.

We have printed elsewhere in this issue the highlights of the report presented by Dr. John S. Mills, its chairman. Here we shall only focus briefly on just a few of the concepts, findings and recommendations.

- A major deficiency in the health care system is *the unavailability of adequate information* for patients, prescribers, dispensers and administrators of drugs. Result: inappropriate drug use and frequent drug-induced disease. Pharmacists could meet this need for both consumers and health professionals. *Education and training of pharmacists must be tailored to meet this informational role.*
- Pharmacy is advanced conceptually as a *knowledge system that provides a service, translating part of the data into drug products* which it distributes.
- Educational objectives for pharmacy education are outlined, but above all the necessity for a curriculum based upon *competencies* is pointed out.
- Attention is given to the need for greater emphasis on the *behavioral* and *social sciences* in the curriculum.
- Most important, the thrust of the Millis Report is that there is a whole universe of health care service — drug therapy — that is not being adequately, properly or effectively provided. The pharmacist is the individual who with appropriately modified educational preparation is the health professional who can best meet the unmet needs for rational, effective use of medication.

The prevention and treatment of disease and the maintenance of health rests in substantial part upon the contributions that pharmacists should make in the drug aspect of the delivery of health care.

This, then, is the lesson to be learned from reading the "Millis Report" — *Pharmacists for the Future.* It can be ignored by pharmacists only at the peril of their professional and economic survival. It can be ignored by other health professionals only at the neglect of their specific responsibilities to patients and public health. It is hard to believe that the implications of the report will be ignored indefinitely by informed members of the public and their representatives in government.

Thus, the responsibility for initiating and implementing the required changes in "pharmacy" will either be assumed by pharmacists and their organizations or others surely must and will inevitably take the steps necessary to meet the challenge so incisively stated in the "Millis Report."

What part will each of you play in this drama?

— Nathan I. Gruz, R.Ph.

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[1] The American Association of Colleges of Pharmacy, *Pharmacists For The Future:* The Report of the Study Commission on Pharmacy. Health Administration Press, Ann Arbor, MI., 1975.

[2] Elliott, Edward C., Director, *The General Report of the Pharmaceutical Survey,* 1946-1949, American Council for Education, Washington, D.C., 1950.

calendar

September 9 (Thursday) — MSHP Meeting, Johns Hopkins Hospital

September 19–23 — NARD Convention, San Francisco

November 4 (Thursday) — MPhA Simon Solomon Pharmacy Economics Seminar

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PHARMACISTS FOR THE FUTURE

The Report of the Study Commission on Pharmacy — The Millis Commission

Principal Concepts, Findings and Recommendations
Dr. John S. Millis, Commission Chairman

Pharmacy

The Commission believes that pharmacy should be conceived as a *knowledge* system which renders a health service by concerning itself with understanding drugs and their effects upon people and animals. Pharmacy generates knowledge about drugs, acquires relevant knowledge from biological, chemical, physical, and behavioral sciences; it tests, organizes, and applies that knowledge. Pharmacy translates a substantial portion of that knowledge into drug products and distributes them widely to those who require them. Pharmacy knowledge is disseminated to physicians, pharmacists, and other health professionals and to the general public to the end that drug knowledge and its consequent products may contribute to the health of individuals and the welfare of society.

Pharmacy has usually been conceived as a product system. Important as drug products are, in our judgment knowledge about those products and those people who consume them is even more important. Hence we view pharmacy as a whole as a knowledge system — not a product system.

The Study Commission on Pharmacy was formed at the request of the American Association of Colleges of Pharmacy after careful study and planning by a committee under the leadership of Dr. Arthur Schwarting, former president of the Association and dean of the School of Pharmacy at the University of Connecticut. The Commission's work was supported by generous grants from the American Foundation for Pharmaceutical Education, the W. K. Kellogg Foundation, the Commonwealth Fund, the Edna McConnell Clark Foundation, and the Robert Wood Johnson Foundation.

The membership was composed of twelve persons with extensive experience and knowledge in the fields of pharmaceutical manufacturing, pharmaceutical research, pharmacy practice, pharmacy education, medicine, nursing, behavioral science, and higher education. Unhappily, the contributions of Mr. Henry DeBoest were lost because of his untimely death in December 1973. The assigned task as seen by the Commission was to acquire data, to gather informed opinion, to think, and to make rational and practical suggestions for the improvement in the education of the pharmacists for the future — all of this to the end that more excellent drug-related health services can be provided to the citizens of our nation.

Fortunately, data sufficient to our needs were readily available. We had the privilege of receiving the informed opinions, the advice and suggestions of more than eighty leaders from pharmacy practice, pharmacy education, medicine, nursing, hospital administration, pharmaceutical research, pharmaceutical manufacturing, professional pharmacy organizations, and government at both the federal and state level. We are deeply grateful to those men and women who took the time to share their knowledge and experience with us.

The most important part of the Commission's responsibility was to think and to learn. That frequently difficult task was accomplished by the Commission working throughout two years as a committee-of-the-whole — digesting data, evaluating opinions, developing concepts, formulating conclusions. Some will claim that there is no such thing as group thinking. My experience and observation of the operation of the Study Commission on Pharmacy has convinced me that the assertion is wrong. As chairman, I wish to report that I have had the privilege of working with a group of distinguished, thoughtful, and devoted people who have given freely of their time and effort to this enterprise. Pharmacy and pharmacy education should be eternally grateful to them.

(Continued on Page 11)

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*Ayd, F.J., Jr. (Ed.): Int. Drug Ther. Newslett. 7(9/10):35-50 (Nov./Dec.) 1972.

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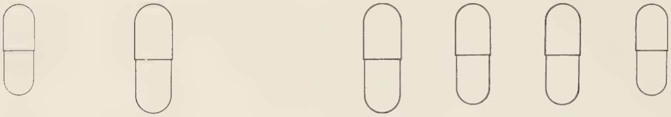

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Warnings: *Usage in Pregnancy:* Safe use of imipramine during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed.

Extreme caution should be used when this drug is given to

—patients with cardiovascular disease because of the possibility of conduction defects, arrhythmias, myocardial infarction, strokes and tachycardia;

—patients with increased intraocular pressure, history of urinary retention, or history of narrow-angle glaucoma because of the drug's anticholinergic properties;

—hyperthyroid patients or those on thyroid medication because of the possibility of cardiovascular toxicity;

—patients with a history of seizure disorder because this drug has been shown to lower the seizure threshold;

—patients receiving guanethidine or similar agents since imipramine may block the pharmacologic effects of these drugs

Since imipramine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as operating an automobile or machinery, the patient should be cautioned accordingly

Usage in Children: Tofranil-PM, brand of imipramine pamoate, should not be used in children of any age because of the increased potential for acute overdosage due to the high unit potency (75 mg., 100 mg., 125 mg and 150 mg.). Each capsule contains imipramine pamoate equivalent to 75 mg., 100 mg., 125 mg. or 150 mg. imipramine hydrochloride

Precautions: It should be kept in mind that the possibility of suicide in seriously depressed patients is inherent in the illness and may persist until significant remission occurs. Such patients should be carefully supervised during the early phase of treatment with Tofranil-PM, brand of imipramine pamoate, and may require hospitalization. Prescriptions should be written for the smallest amount feasible.

Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, Tofranil-PM, brand of imipramine pamoate, may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.

Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.

An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.

In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g., paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.

Avoid the use of preparations, such as decongestants and local anesthetics, which contain any sympathomimetic amine (e.g., adrenalin, noradrenalin), since it has been reported that tricyclic antidepressants can potentiate the effects of catecholamines.

Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.

Both elevation and lowering of blood sugar levels have been reported.

Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential, since there is limited clinical experience.

Adverse Reactions: Note: Although the listing which follows includes a few adverse reactions which have not been reported with this specific drug, the pharmacological similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when imipramine is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.

Neurological: Numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue); drug fever; cross-sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdominal cramps, black tongue.

Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation or depression of blood sugar levels.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.

Dosage and Administration: In adult outpatients, therapy should be initiated on a once-a-day basis with 75 mg./day. This may be increased to 150 mg./day which is the dose level which usually obtains optimum response. If necessary, dosage may be increased to 200 mg./day. Dosage should be modified as necessary by clinical response and any evidence of intolerance. Daily dosage may be given at bedtime, or in some patients in divided daily doses.

Hospitalized patients should be started on a once-a-day basis with 100-150 mg./day and may be increased to 200 mg./day. Dosage should be increased to 250-300 mg./day if there is no response after two weeks.

Following remission, maintenance medication may be required for a longer period of time at the lowest dose that will maintain remission. The usual adult maintenance dosage is 75-150 mg./day on a once-a-day basis, preferably at bedtime.

In adolescent and geriatric patients, capsules of Tofranil-PM, brand of imipramine pamoate, may be used when total daily dosage is established at 75 mg. or higher. It is generally unnecessary to exceed 100 mg./day in these patients. This dosage may be given once a day at bedtime or, if needed, in divided daily doses.

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I shall proceed to state the principal concepts, findings, and recommendations advanced by the Study Commission which are the core of its Report to which we have given the title — *Pharmacists for the Future.*

Pharmacy — A Health Service

The Commission believes that pharmacy is a health service and that any examination of pharmacy or any of its parts must be made within the context of the entire health service system. The Commission further believes that among the deficiencies in the health care system, an important one is the unavailability of adequate information for those who consume, prescribe, dispense, and administer drugs. This deficiency has resulted in inappropriate drug use and an unacceptable frequency of drug-induced disease. Pharmacists are seen as health professionals who could make an important contribution to the health care system of the future by providing information about drugs to consumers and health professionals. Education and training of pharmacists now and in the future must be developed to meet these important responsibilities.

Pharmacists

We have learned that there are pharmacists practicing the profession in every part or subsystem of pharmacy. They are involved in generating knowledge through research, in translating knowledge into technology through development, testing knowledge and its consequent technology in clinical trials; in dosage formulation; in manufacture; in distribution; in dispensing; in administering; in information dissemination; in regulation; in systems management; and every other activity that one can conceive as within the knowledge system we call pharmacy.

The Study Commission, therefore, believes that a pharmacist must be defined as an individual who is engaged in *one of the steps of a system called pharmacy.* We cannot define a pharmacist simply as one who practices pharmacy. Rather, he must be defined as one who practices a *part* of pharmacy which is determined by the activities carried on in one of the subsystems of pharmacy. A pharmacist is characterized by the common denominator of drug knowledge *and the differentiated additional knowledge and skill* required by his particular role.

A Judgment of Pharmacy

Based upon its collective knowledge and experience and upon its recent observation the Commission feels that the system of pharmacy must be described as being both effective and efficient in developing, manufacturing and distributing drug products. But it cannot be described as either effective or efficient in developing, organizing, or distributing knowledge and information about drugs. When viewed as a knowledge system, which it is, pharmacy must by judged as only partially successful. It has not in the past and does not now make its full contribution to the health of the nation and of its citizens. The Study Commission therefore recommends that major attention be given to the problems of drug information to find out who needs to know, what he needs to know, and how these needs can be met with speed and economy.

Objectives of Pharmacy Education

The Commission believes that in spite of the real and multifaceted differentiation in the practice roles of pharmacists, there is a *common* body of knowledge, skills, attitudes and behavior which all pharmacists must possess. We believe that the objectives of pharmacy education must be stated in terms of both the *common* knowledge and skill and the *differentiated and/or additional* knowledge and skill required for specific practice roles. We, therefore, state a series of limited educational objectives which, if met in sequential order, will accomplish both *common and differentiated objectives.*

We recommend the following three component objectives for pharmacy education:

1. The mastery of the knowledge and the acquisition of the skills which are *common* to all the roles of pharmacy practice.
2. The mastery of the additional knowledge and the acquisition of the additional skill for the differentiated roles which require additional *pharmacy* knowledge and experience.
3. The mastery of the additional knowledge and the acquisition of the additional skill needed for those differentiated roles which require additional knowledge and skill *other than pharmacy.*

You will note that the Study Commission does not advocate either the "two-track" concept nor the "single track" concept of pharmacy education. In fact the Commission rejects the "track" concept entirely. We feel that the concept is misleading and is based upon misconception of the nature of pharmacy. If there is a useful analogy it is that of a tree. All of the practices of pharmacy have common roots; they differentiate from a common body of knowledge and skill (the trunk of the tree); they differentiate in horizontal directions, in vertical directions, and in directions having both horizontal and vertical components as do the branches of a tree.

The Competency-based Curriculum

The Study Commission advocates that the curricula of the colleges of pharmacy be based upon the competencies desired for the graduates and not upon the volume of knowledge available in the relevant basic sciences. Pharmacy is a profession. The objective of any professional education is to equip its graduates to practice with superior skill. The quality of that education, in the last analysis, must be measured by the quality of the performance of the graduates. Professionals must *both know and do.* The professional is one who can and does translate knowing (science) into doing (art). But the ultimate justification of the educational process is the *doing with competence.* Hence, the pharmacy curriculum must be designed to assure, as far as possible, that pharmacy graduates can "do" with competence and should be structured around clearly defined and essential competencies.

The Clinical Teacher

The Study Commission recognizes that the faculties of colleges of pharmacy have a most difficult task in identifying and accurately defining the competencies which pharmacists must have in the near and the long range future. In recent decades very few faculty members have practiced pharmacy in any form. Though highly competent in one or more basic science they have little knowledge, experience, or understanding of what practicing pharmacists do, can do, or should do. There are a growing number of clinical teachers on the faculties, but few of

(Continued on Page 14)

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct non-therapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

them are thoroughly trained in any basic science. They can and do give anecdotal reports of new and imaginative pharmacy services with which they have experimented. However, not being fully trained in a relevant basic science, they are unable to identify with precision the knowledge which is specifically relevant to such practice. Pharmacy does not have more than a handful of people who, in the system of medical education, are identified as "clinical scientists." These persons are fully-trained clinicians and fully-trained scientists. They form the indispensable link between knowing and doing. They can identify the competencies required and they can identify accurately the basic science which is relevant to those competencies.

A further problem in pharmacy arises from the fact that, at the present moment, many of the "expanded" and novel roles of pharmacy practice are the result of what a relatively small number of highly motivated and imaginative pharmacists wanted to do, felt they should do, or believed they could do in providing improved patient care. Few of these roles have been subject to rigorous and scientific examination and measurement of outcomes. Few have been carefully analyzed for their cost/benefit ratios. The competencies of which we speak are those which are essential to an ever-increasing quality of drug-related services to patients and are of such benefit that their cost will be gladly paid by the health care system.

In response to these several considerations, the Study Commission makes three recommendations:

1. That serious efforts be made by all colleges of pharmacy to provide members of the faculties effective opportunities to practice pharmacy in some role to the end that they may be more conscious of the essential relationship of knowledge and skill and, further, serve as role models for their students.
2. That the research efforts of pharmacy faculty members be directed as much as possible to the solution of problems of pharmacy practice.
3. That a concerted effort be made to organize and finance a program to appropriately educate and train a small number (c. 100) of "clinical scientists" for pharmacy and pharmacy education.

Behavioral Science

The Study Commission emphasizes that pharmacy is a knowledge system in which *chemical substances called drugs* and *people called patients* interact. Needed and optimally effective drug therapy results only when drugs and those who consume them are fully understood. We, therefore, suggest that one of the first steps in the review of the educational program should be weighing the relative emphasis given to the physical and biological sciences as against the behavioral and managerial sciences. It is our opinion that the latter disciplines are just as *basically* relevant to the practice of pharmacy as are the former. They belong therefore in the category of the required "basic sciences," not in the category of electives to be taken only if the student wishes or has time for them.

Advanced Education

The Study Commission believes that those colleges of pharmacy which have adequate resources in faculty, clinical learning opportunities, research facilities, and financial support should develop, in addition to the first professional degree, programs of instruction at the graduate and advanced professional level for the more differentiated roles of pharmacy practice. Conversely, the Study Commission believes that those schools which do not have adequate resources should not attempt any instruction beyond the first professional degree.

Educational Environment

It is the opinion of the Study Commission that the optimal environment for pharmacy education is the university health center for the full range of knowledge, skill, and practice can be found there. However, the Commission does *not* believe that it is practical or in the public interest to recommend that all colleges of pharmacy must be so located. Alternative arrangements, if effectively utilized, can provide an acceptable environment for the education of students at the baccalaureate level. We have serious reservations about such schools attempting instruction of a more sophisticated and/or more differentiated character.

Credentialling

It is the opinion of the Study Commission that all aspects of credentialling pharmacists and pharmacy education would be enhanced by the services of a national board of pharmacy. Licensure requires examination. Licensure would be improved with the assistance of improved testing provided by a highly professional and skilled examining body. Relicensure may be required in the near future; that will require examination. Again, the effectiveness of the process will depend upon the quality of the examining instruments. Accreditation of schools of pharmacy would be greatly strengthened by the availability of high quality and reliable examinations to measure student progress and achievement. Specialization is almost sure to come in pharmacy. The certification of special competence must rely upon dependable examining procedures. Neither pharmacy nor the public can afford the cost of a host of examining bodies, each with inadequate professional staff and no research capacity. Therefore, the Study Commission recommends that the appropriate professional bodies of pharmacy give prompt and serious attention to the organization and support of a National Board of Pharmacy Examiners.

Conclusion

It is the hope of all of us who have had the privilege of serving as the Study Commission that you will read our Report carefully and thoughtfully. The impact of our work will not be made by the length of the Report nor by the elaborateness of its data. Rather, if it does produce an elevation in the quality of pharmacy education and thereby an improvement in the level of health care, it will be because of the rationality and the thoroughness of the intellectual exercise through which a group of thoughtful men and women have gone. We believe that the test of our conclusions and recommendations is not that they agree with your preconceptions nor whether they will result in a more advantageous position for the profession of pharmacy. Rather, we believe that the test must be of the logic of our thoughts and of the clarity with which we have seen the ultimate goal of more effective and more efficient drug services.

Copies of the complete report, "Pharmacists for the Future", are available at $6.00 each from the Health Administration Press, School of Public Health, University of Michigan, Ann Arbor, Michigan 48104.

MEMBERSHIP OF THE STUDY COMMISSION ON PHARMACY

John A. Biles, Ph.D.
Dean, School of Pharmacy
University of Southern California

Robert K. Chalmers, Ph.D.
Professor of Clinical Pharmacy
Associate Dean, Purdue University

Leighton E. Cluff, M.D.
Professor and Chairman
Department of Medicine
University of Florida

Bryce Douglas, Ph.D.
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Research and Development
Smith Kline & French Laboratories

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Harvard Medical School, and
Chief of Clinical Pharamacology Unit
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and President Emeritus
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Case Western Reserve University

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institutional pharmacy

Excerpts from the Pharmacy and Therapeutics Bulletin, University of Maryland Hospital, Institutional Pharmacy Programs,

Carolyn Love, M.S.
Drug Information Specialist, Editor.

Skin Tests for Anergy

The following is a list of skin tests for anergy and the procedures for their use. All are given intradermally in the flexor surface of the forearm.

1. **Candida Skin Test (Dermatophyton-O; Hollister-Stier)**

   This skin test is prepared from Candida (Monilia) albicans and is recommended for testing of delayed sensitivity. It is available in a strength of 1:100 and generally for the test to be positive, a dilution of no stronger than 1:100 is used. Approximately 30 percent of patients tested will react positively. The test sites are observed 24-72 hours later for erythema and induration. If the reaction area is 5-20 mm. the test dilution can be used to start treatment. If the reaction area is greater than 20 mm. further dilution of the extract should be made (1:500). The dose administered is 0.1 ml. in all cases. The solution itself is stable for 12 months if refrigerated.

2. **Coccidiodin or Histoplasmin**

   The dose administered is 0.1 ml. and the test is read at 24, 48 and 72 hours. Both solutions are 1:100 dilutions.

3. **Mumps Skin Test**

   This antigen is a suspension of killed mumps virus. Each ml. of the skin test antigen contains at least 20 complement-fixing units. A dose of 0.1 ml. should be administered and the reaction site should be read at 4 hours to assess arthrus reactions and then, at 24-48 hours to assess delayed hypersensitivity. Approximately 96 percent of patients will have a positive reaction (diameter of induration and erythema of at least 5 mm.). The solution is stable for 18 months after reconstitution if refrigerated.

4. **Purified Protein Derivative (Tuberculin, Parke-Davis)**

   This test is available in three strengths: first strength PPD (1:10,000), intermediate strength PPD (1:2,000), and second strength PPD (1:40). A dose of 0.1 ml. is administered and the reaction site is read at 24, 48 and 72 hours. A positive reaction would be erythema or induration of at least 5 mm.

5. **Streptokinase-Streptodornase (Varidase, Lederle)**

   The intermediate strength test preparation is diluted so that it contains 4 units of streptokinase and 1 unit of streptodornase per 0.1 ml. while the second strength solution contains 40 units of streptokinase and 10 units of streptodornase per 0.1 ml. dose. Approximately 52 percent of patients tested respond positively to the intermediate strength whereas 95 percent of patients respond positively to the second strength solution. The test is read in 24-72 hours and a positive reaction would be erythema or induration of at least 5 mm. The test solution is stable after reconstitution for 12 months if refrigerated.

6. **Trichophyton (Dermatophyton, Hollister-Stier)**

   This test is prepared from filtrates of trichophyton organisms. Diagnostically it is used in older patients to determine exposure to trichophyton fungus. Also, since many people have been exposed to this fungus, it may be used as a test of anergy. It is available in a strength of 1:30 and is administered in a 0.1 ml. dose. Approximately 15 percent of patients tested react positively. Erythema and induration of at least 5 mm. in 24-72 hours is considered a positive test. The solution itself is stable for 12 months if refrigerated.

References

1. Product literature on each of the agents.
2. Palmer and Reed: "Delayed Hypersensitivity Skin Testing — Response Rates in a Hospitalized Population." *J. Infect. Dis. 130 (2):* 132-137 (Aug.), 1974.
3. Palmer and Reed: "Delayed Hypersensitivity Skin Testing — Clinical Correlates and Anergy." *J. Infect. Dis., 130 (2):* 138-143 (Aug.), 1974.

Cautions to Travelers

1. It may be wise to take the following with you on your vacation:
   a. Typed copies of regular ongoing prescriptions. The prescriptions should include the trade, generic and chemical name of the drug as well as dosage. Also, a prescription for replacement of eyeglasses may be useful.
   b. Immunization records (e.g. Many physicians are reluctant to give tetanus shots unless absolutely necessary).

   c. Medic-Alert or other means of listing any chronic health conditions (e.g. diabetes, heart disorders), allergies, or a list of any medications taken regularly. This could be useful in an accident or when you are unable to communicate with a physician.
   d. Telephone numbers of physicians who regularly treat you so that a new physician can get information needed as rapidly as possible.

2. Check with the U. S. Embassy in the particular country visited and they can supply you with a list of U. S. trained physicians practicing in the country visited. This often is wise to assure quality health care and the physician may be more familiar with U. S. drugs.
3. Patients with chronic illnesses should carry a sufficient supply of their maintenance drugs with them (e.g. digitalis, anticoagulants, oral contraceptives). This is necessary since the potency and quality of many drugs differ abroad. It is necessary, however, to be aware of the storage requirements of each individual drug. The pharmacist can be useful in providing such information.
4. Pharmacies in some foreign countries administer injections. This is not advisable since disposable equipment often is not used. This means that the equipment may not be sterile, the needles previously used and may, in fact, promote serious consequences such as infection.
5. Diabetic patients who will be traveling in Canada should be warned that supplies of 80 unit and 40 unit insulin may be scarce or even non-existent. Patients should be warned of the potential hazard of using a 40 unit or 80 unit syringe with U-100 insulin. For this reason patients should either take their own insulin supplies or be converted to U-100 insulin. It is necessary to remember to keep insulin supplies under refrigeration.
6. Pregnant women or women of child-bearing age should be cautioned about purchasing drugs without a prescription since many drugs taken during the first three months of pregnancy may cause congenital defects.
7. Be very careful in purchasing drugs without a prescription when traveling abroad. Many of these drugs may contain potentially injurious drugs. For example, chloramphenicol which is present in many cough and cold preparations may lead to a fatal aplastic anemia with prolonged or indiscriminate use. Likewise, many products may contain aminopyrine or dipyrone which can cause fatal blood dyscrasias. Dipyrone is sold in Latin America, for example, under numerous names and in various drug combinations:

   Alginodia (Upjohn)
   Conmel (Winthrop)
   Diprona MK (McKesson)
   Baralgin (Hoechst)
   Beserol (Winthrop)
   Buscapina Compositum (Boehringer)
   Coricidin S/A (Schering)
   Corilin Pediatrico Suppositorios (Schering)
   Dipirona MK Compuesta (McKesson)
   Doriflex (Merrell)
   Valpiron (Endo)

(Continued on Page 20)

Table of Iron Preparations

Drug	Unit Strength	Iron Content %	 Mg. Elemental Fe	 mEq Fe
Ferrous Fumarate Tablet (Feostat®)	325 mg.	30	97.5	3.8
Ferrous Gluconate Tablet (Fergon®)	320 mg.	12	38.4	1.5
Ferrous Sulfate, Hydrous Tablet (Various Manufacturers)	325 mg.	20	65	2.3
Ferrous Sulfate, Exsicated Tablet (Feosol® Tablet)	200 mg.	30	60	2.6
Ferrous Sulfate, Exsicated Capsule (Feosol® Spansule)	150 mg.	30	45	1.8
Ferrous Fumarate Suspension (Feostat®)	100mg/5cc	30	30	1.2
Ferrous Fumarate Drops (Feostat®)	75mg/5cc	30	22.5	0.9
Ferrous Gluconate Elixir (Fergon®)	300mg/5cc	12	36	1.4
Ferrous Sulfate, Exsicated Elixir (Feosol® Elixir)	220mg/5cc	30	66	2.8
Ferrous Sulfate, Exsicated Syrup (Fer-in-sol® Syrup)	150mg/5cc	30	45	1.8
Ferrous Sulfate, Exsicated Drops (Fer-in-sol® Drops)	125mg/1cc	30	37.5	1.7

Table of Calcium Preparations

Drug	Unit Strength	Calcium Content %	 Mg. Elemental Ca	 mEq Ca
Calcium Carbonate and Soda Tablet	650 mg.	40	263	13.2
Calcium Gluconate Tablet	1 Gm	9	92	4.6
Calcium Lactate Tablet	300 mg.	13	39	1.9
Neo Calglucon Syrup (Ca Glubionate)	1.395Gm/4ml (equivalent to 1Gm) Ca Gluconate	9	92	4.6
Calcium Chloride Oral Solution	2Gm/5ml	28	550	36.0
Calcium Chloride Injection	1Gm/10ml	27	272	13.6
Calcium Gluconate Injection*	1Gm/10ml	9.8	97.5	4.87

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*Also contains calcium d-saccharate as stabilizer

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Datarex® is a completely automated, inventory management system designed to cut your labor costs while increasing your sales and profits. Individualized to your exact specifications, your Datarex® system will be as extensive or as limited as you want it to be.

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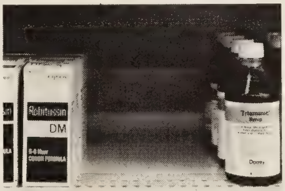
It's been estimated that the average pharmacy loses up to 2% of its bottom-line profits because its price stickers have failed to keep pace with inflationary changes.

Datarex® makes all the adjustments automatically. *Automatically.*

The hole in your shelf, the drop in your curve.



We found out something else about the average pharmacy: it loses up to 15% of its possible sales because of outs—those empty shelves.

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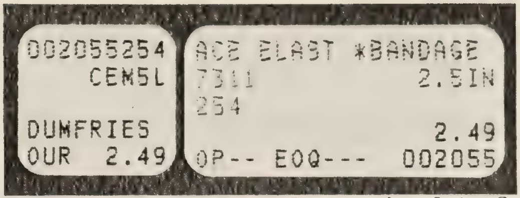

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002055254   ACE ELAST *BANDAGE
    CEM5L   7311          2.5IN
            254
DUMFRIES                   2.49
OUR  2.49   OP-- EOQ---  002055
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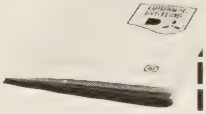

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Diodohydroxyquin (Diodoquin®, Searle or iodo-chlorhydroxyquin) a drug available in many foreign countries for treatment of intestinal amebiasis may also be prescribed for "chronic nonspecific diarrhea" in young children. This drug may cause optic atrophy and permanent loss of vision if improperly used. Rather than treat oneself with this drug it is wiser to consult an American trained physician.

The Proper Use of Protamine as a Heparin Antagonist

In treating heparin overdose and for neutralizing heparinized blood in dialysis or cardiopulmonary bypass, the drug of choice is protamine sulfate. Protamine sulfate injection, U.S.P., is available as a 1 percent solution (50 mg/5 ml. ampule) (1).

Proper administration of protamine sulfate is important for several reasons. If administered too rapidly, hypotension, bradycardia, dyspnea, and transitory flushing may occur (2, 3). In case of an overdose, protamine sulfate may inhibit the thrombin-fibrinogen reaction and hence act as an anticoagulant (3, 4).

In order to minimize these complications, several factors in the proper dosing and administration should be considered. First of all, an in vitro test should be done to determine the length of time it takes for the patient's blood to return to normal, Next, I.V. protamine should be administered slowly in divided doses (no more than 50 mg. over a ten-minute period) (1, 3). One mg. of protamine sulfate neutralized 78-95 U.S.P. units of heparin activity derived from lung tissue (1, 3, 4). (This equivalence may vary, depending upon the source and manufacture of the heparin.) Since one-half of heparin is eliminated from the body within one and one-half hours (5), the amount of protamine administered is reduced in proportion to the time elapsed from the last heparin injection by about 1 mg./minute (2). In conclusion, proper use of protamine in the treatment of heparin overdose can possibly avert further drug-induced problems.

References upon request.

Sinemet® (Carbidopa-Levodopa combination)

Indications: Sinemet®, a combination of levodopa and carbidopa in a 10:1 ratio, is indicated in the treatment of idiopathic Parkinson's disease, post-encephalitic parkinsonism, and symptomatic parkinsonism produced by manganese and carbon monoxide intoxication. It may allow use of lower doses of levodopa with a resulting decrease in incidence of certain adverse effects such as nausea, vomiting and cardiac arrythmias. Sinemet® also permits more rapid dosage titration and the use of supplemental pyridoxine if necessary.

Mechanism of Action: Carbidopa by inhibiting the peripheral metabolism of levodopa allows more levodopa to enter the brain.

Dosage: Sinemet® tablets are available in two strengths: 10/100 (10 mg. carbidopa, 100 mg. levodopa) and 25/250 (25 mg. carbidopa, 250 mg. levodopa). Initially patients are usually begun on Sinemet® 10/100 t.i.d. and the dose is titrated upward to six tablets daily. Sinemet® 25/250 is usually substituted if higher dosages are necessary. The maximum recommended dosage is eight tablets of Sinemet® 25/250.

Adverse Effects: Due to increased brain levels of levodopa, C.N.S. side effects are increased. These side effects include choreiform, dystonic, and other involuntary movements as well as various mental changes (e.g. hallucinations, depression, paranoia, delusion, agitation, etc.) and convulsions.

Precautions:

1. It is especially important to be sure that the patient understands that it is not necessary to continue levodopa therapy once Sinemet® is started. Levodopa therapy should be discontinued at least eight hours before Sinemet® is begun.
2. Patients with well controlled chronic wide angle glaucoma, if treated with Sinemet®, should be monitored closely for intraocular pressure changes.
3. Sinemet® should be administered cautiously to the following: patients with severe cardiovascular or pulmonary disease, bronchial asthma, renal, hepatic or endocrine disease and peptic ulcer patients. As with extended therapy with levodopa, patients receiving chronic Sinemet® therapy should have periodic reviews of hematopoietic, hepatic, renal and cardiovascular function.
4. Sinemet® should not be given to nursing mothers and should be used in women of childbearing age only when therapeutic benefits outweigh the risks to the unborn child.
5. Patients should not receive concomitant monoamine oxidase inhibitors and Sinemet®. This may result in hypertension, flushing of the face, light headedness and pounding of the heart. Some studies have also suggested that concomitant MAOI and levodopa or Sinemet® therapy may worsen akinesia and tremor.

Comment: Sinemet® offers an alternative to traditional levodopa therapy. It is characterized by less nausea, vomiting and cardiac arrythmias and allows more rapid dosage titration and the use of supplemental pyridoxine if necessary. These advantages should be weighed, however, against the increased potential for C.N.S. adverse effects.

(References upon request)

Furosemide — Chloral Hydrate Interaction

An adverse effect was observed in cardiac patients who received 40-120mg. of I.V. furosemide (Lasix®) preceded by nocturnal sedation with chloral hydrate (Noctec®) in the same 24 hour period. The reaction consisted of diaphoresis, hot flashes, variable blood pressure including hypertension, and uneasiness. Intravenous furosemide which was not preceded by chloral hydrate in the prior 24 hours did not cause the reaction, nor, did the reaction occur when flurazepam (Dalmane®) was substituted.

[*J. Amer. Med. Assoc.*, *232* (6), 638 (1975)]

Insulin Dosage Errors

The introduction of U-100 insulin has led to certain insulin dosage errors. These dosage errors involve the "dead-space-volume" of insulin syringes. Dead-space-volume (D.S.V.) is usually defined as the non-measured volume in the syringe tip, needle hub and needle shaft. The D.S.V., depending on syringe manufacturer, may represent a volume of 0.01 to 0.1 ml. (1-10 units of U-100 insulin). While this error may not be significant where large doses of insulin are used, it can be very significant when small amounts of insulins are mixed. For example, if a patient has been stabilized on 10 units of regular and 18 units of NPH insulin it has been shown that the ratio of insulin drawn into the syringe may vary from as much as 10:18 to 18:10 depending on the syringe used.

The following chart lists the D.S.V. for various insulin syringes:

Manufacturer	**Syringe D.S.V.s (units of U-100 insulin)**
Sherwood	8 units
Eisele	9 units
B-D	trace
Pharmaseal	5 units

If confronted with a previously stable diabetic patient who is no longer controlled on an insulin mixture one should consider this insulin dosage error. It should be ascertained, then, whether there has been a change in the brand of syringe used, or in the order of insulin mixing. It might, in fact, be wise to instruct diabetic patients not to change the brand of syringe used nor the order of insulin mixing.

Some syringe manufacturers have begun to include copies of cautionary statements in bulk packages of syringes. As of July 6, 1976, however, all manufacturers will be required to include a label warning and cautionary statement for all insulin syringes.

(References upon request)

Parenteral Digoxin

Absorption of digoxin after I.M. injection is erratic and incomplete. It also causes tissue damage. These considerations argue strongly, then, against intramuscular administration of digoxin.

[*Clinical Pharmacology and Therapeutics, 16* (3), 433 (1974)]

Oral vs. I.M. Diazepam

Oral diazepam gives faster, higher blood levels when compared to I.M. administration of the drug.

Route of Administration	**Peak Concentration**	**Time to Reach Peak Concentration**
I.V.	1,607ng/ml	15 min.
I.M.	293ng/ml	60 min.
P.O.	492ng/ml	30 min.

[*Clinical Pharmacology and Therapeutics, 16* (3), 483 (1974)]

Aluminum Hydroxide Equivalency of Basaljel®

	$Al(OH)_3$	**Elemental Al**
Basaljel Suspension	408mg/5cc	141mg/5cc
Basaljel Extra Strength Suspension	1000mg/5cc	346mg/5cc
Basaljel Capsule	500mg/cap	173mg/cap
Basaljel Tablet	500mg/tab	173mg/tab

(Wyeth Laboratories)

Stability of I.V. Ampicillin

The Department of Institutional Pharmacy Programs I.V. Admixture Service has revised its policy on preparation of I.V. ampicillin. This change is the result of new stability data concerning ampicillin. Recent articles (1) have shown, for example, that ampicillin is stable for 24 hours in normal saline with approximately 10 percent loss in potency. In contrast, traditional dilution with 5 percent Dextrose in Water (D_5W) could lead to as much as 50 percent loss in 24 hours.

PERCENT DEGRADATION OF 1% AMPICILLIN IN NORMAL SALINE AND 5% DEXTROSE IN WATER ACCORDING TO TIME AND TEMPERATURE (27°C)

	Normal Saline	**5% Dextrose in Water**
4 hours	1.8	21.3
8 hours	2.6	31.1
24 hours	8.3	46.5

Ampicillin's increased stability in normal saline as compared to D_5W is attributed to: a) a higher buffering capacity which maintains the pH of the ampicillin in normal ranges (9.3 to 9.4), b) Dextrose enhances the auto-hydrolysis of ampicillin at all temperatures.

Due to this enhanced stability in normal saline, the I.V. Service will now prepare the ampicillin orders if the physician's order sheet specifically states the information:

a. the exact dose of ampicillin
b. the times of administration
c. normal saline as the vehicle
d. the volume of the vehicle

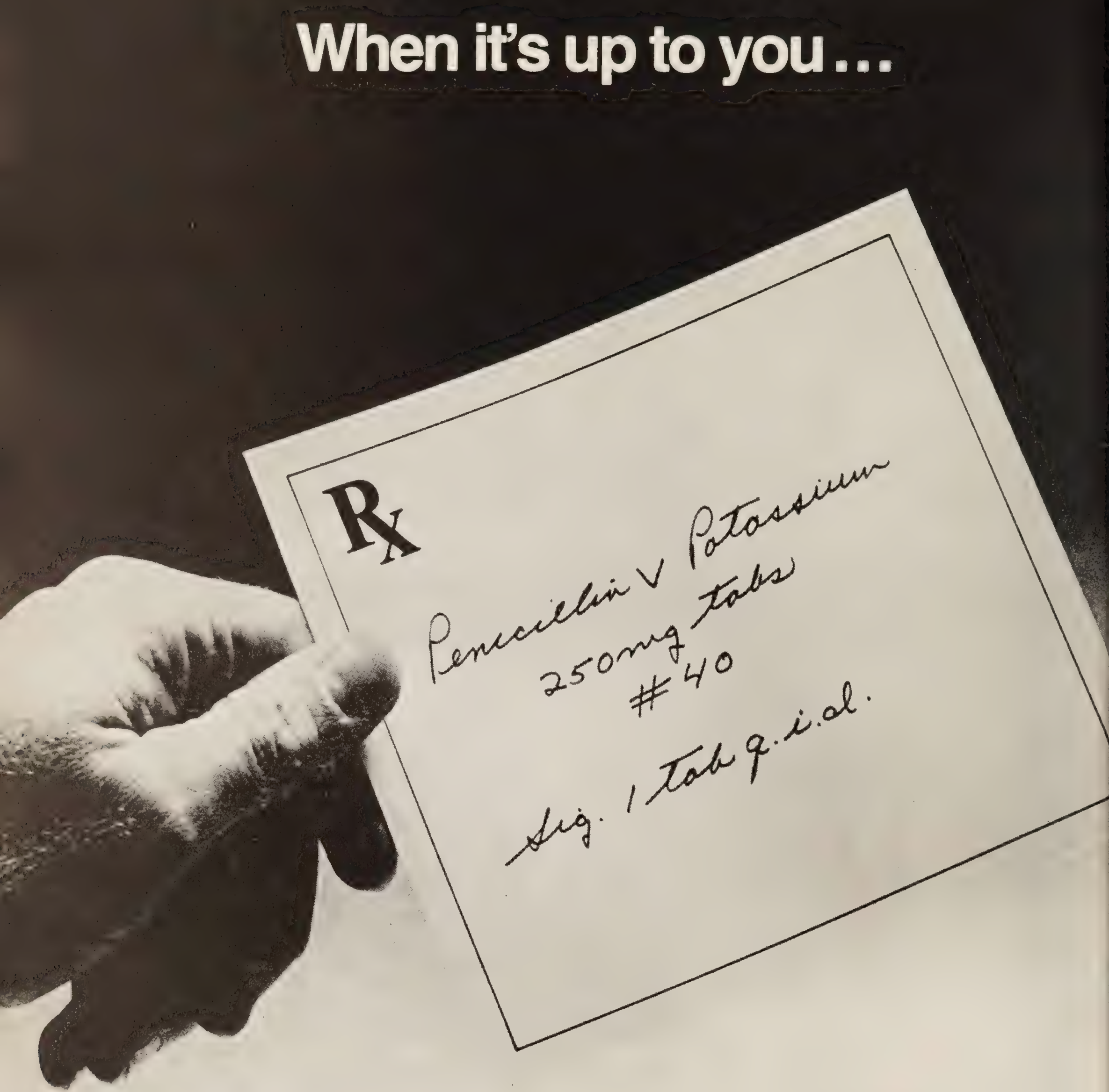
For example: AMPICILLIN 250 mg. IV q6h in 100cc. NORMAL SALINE

NOTE: All ampicillin reconstituted by physician or nurse on the nursing unit must still be discarded within ONE HOUR.

Unless specified on the physician's order sheet that normal saline is the vehicle, it will still be assumed that D_5W is the vehicle of choice and that the ampicillin is to be prepared by the nurse or physician.

References

1. D. Savello and R. Shangraw, "Stability of Sodium Ampicillin Solutions in the Frozen and Liquid States", *Amer. J. Hosp. Pharm. 28,* pg. 754 (Oct.) 1971.
2. P. Hiranaka and A. Frazier, "Stability of Sodium Ampicillin in Aqueous Solutions", *Amer. J. Hosp. Pharm. 29,* pg. 321 (April) 1972.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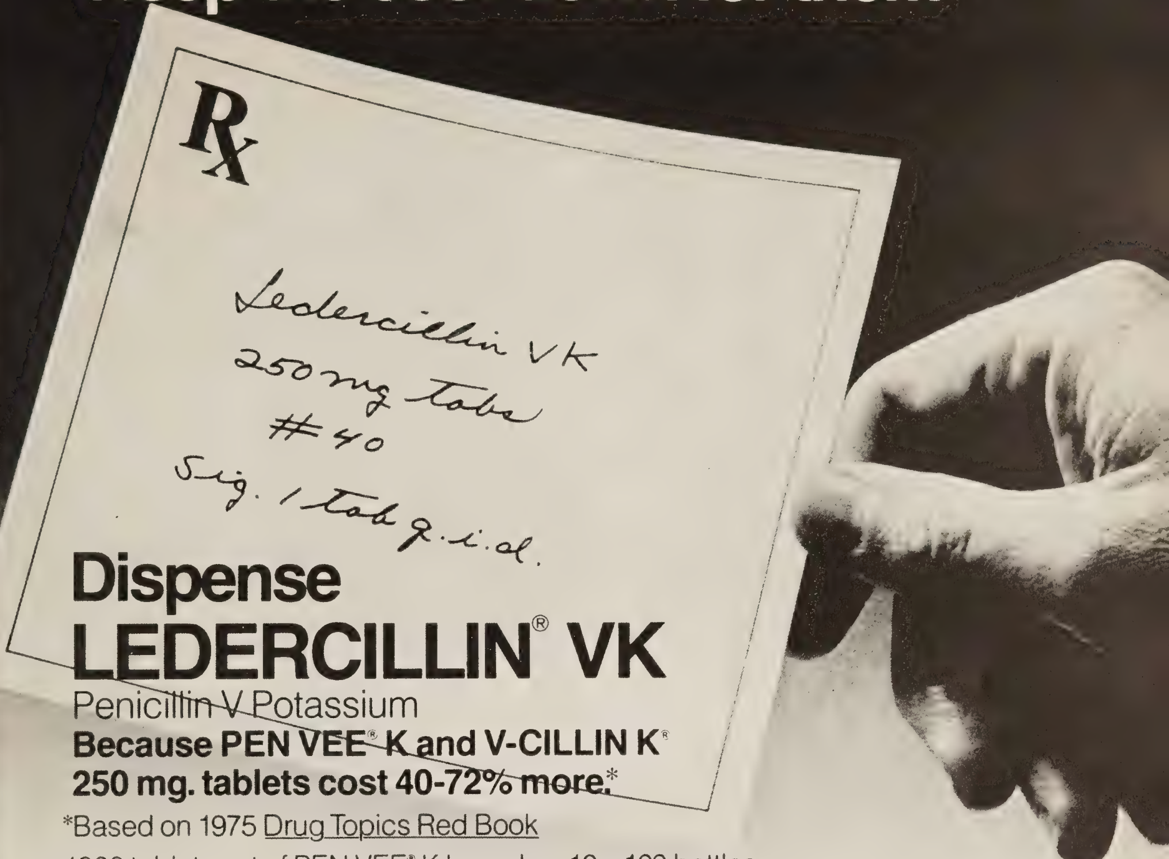
Penicillin V Potassium
250mg tabs
#40
Sig. 1 tab q.i.d.

Keep the cost down for them



Rx

Ledercillin VK
250 mg tabs
#40
Sig. 1 tab q.i.d.

Dispense LEDERCILLIN® VK

Penicillin V Potassium

Because PEN VEE® K and V-CILLIN K® 250 mg. tablets cost 40-72% more.*

*Based on 1975 Drug Topics Red Book

1000 tablet cost of PEN VEE® K based on 10 x 100 bottles
1000 tablet cost of V-CILLIN K® based on 2 x 500 bottles
1000 tablet cost of LEDERCILLIN® VK based on 1 x 1000

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For Oral Solution:

125 mg (200,000 units)/5cc; when reconstituted
80, 100, 150 and 200 cc bottles

250 mg (400,000 units)/5cc; when reconstituted
80, 100, 150 and 200 cc bottles

Also available:

Tablets:

250 mg (400,000 units)
bottles of 100 and 1000; unit-dose 10 x 10's

500 mg (800,000 units)
bottles of 100; unit-dose 10 x 10's

Indications: For the treatment of susceptible infections; *e.g.*, pneumococcal infections (respiratory tract), staphylococcal infections (skin and soft tissue). For full list of approved indications consult labeling.

Contraindications: Previous hypersensitivity to penicillin.

Warning: Serious, occasionally fatal anaphylactoid reactions have been reported; more likely with sensitivity to multiple allergens. Some with penicillin hypersensitivity have had severe reactions to cephalosporin; inquire about penicillin, cephalosporin, or other allergies before treatment. If such occurs, discontinue drug and treat with usual agents (*e.g.*, pressor amines, antihistamines, corticosteroids).

Precautions: Use with caution in those with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm or intestinal hypermotility. Occasional patients will not absorb therapeutic oral amounts. In streptococcal infections, treat until organism is eliminated (10 days minimum) and demonstrate elimination by follow-up culture. With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, black hairy tongue. Skin eruptions, urticaria, serum-sickness reactions, laryngeal edema, anaphylaxis, fever, eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, nephropathy, usually at high parenteral dosage.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Co., Pearl River, New York 10965

809-6

maryland board of pharmacy

Pharmacy changes for December:

New Pharmacies

MSC-Rx, Earl L. Linehan, President; 9-C West Aylesbury Road, Timonium, Maryland 21093.

Changes Of Ownership, Address, Etc.

None.

No Longer Operating As Pharmacies

Garrison Pharmacy, Joseph Fine; 4709 Garrison Boulevard, Baltimore, Maryland 21215.

Cecilton Pharmacy, George M. Schmidt; Box 25, Cecilton, Maryland 21913.

Morrison and Fifer, C. and L. Witzke; 3536 Ellerslie Avenue, Baltimore, Maryland 21218.

Charlesmont Pharmacy, Harmond Amernick, President; 3203 Old North Point Road, Baltimore, Maryland 21222.

Hanks Pharmacy, E. Guy Dowling, President; 221 Maryland Avenue, Cumberland, Maryland 21502.

Pharmacy changes for January:

New Pharmacies

Washington Heights Pharmacy, Lawrence Hogue, President; 205 Washington Heights Medical Center, Westminster, Maryland 21157.

Changes Of Ownership, Address, Etc.

MacLarty's Linthicum Pharmacy, David C. MacLarty; 400 S. Hammonds Ferry Road, Linthicum, Maryland 21090. (Change of ownership; was: R. T. Lathroum.)

Sentry Drug Center #2, David Kastens, President; 1818 Virginia Avenue, Hagerstown, Maryland 21740. (Change of ownership; was: James E. Allen, President.)

Eastpoint Medical Center Pharmacy, Inc., Philip M. Piasecki, President; 1012 Old North Point Road, Baltimore, Maryland 21224. (Change of ownership; was: Leonard Lesser, President.)

No Longer Operating As Pharmacies

J. R. J. Pharmacy, Inc., James Baze, President; 2140 W. Baltimore Street, Baltimore, Maryland 21223.

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Doesn't he
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ASPIRIN . . .
AFTER THREE QUARTERS OF A CENTURY

By John C. Krantz, Jr., Ph.D.
Professor Emeritus
Department of Pharmacology
School of Medicine
University of Maryland

Pain is the arch enemy of mankind. It has thwarted his progress all along his ascent from a dweller in cliffs to the occupant of a modern skyscraper. And man has ransacked this entire earth to acquire a surcease from pain. In the beginning of his search the plant kingdom was his principal source of remedies. However, with the advent of synthetic organic chemistry, initiated by Woehler in 1828, hundreds of new chemical compounds were made available for trial. Among these agents was aspirin which was synthesized by von Gerhardt in 1853. It remained in the chemist's laboratory as just a new compound until the turn of the century.

In 1899 Felix Hoffman, a chemist with the Bayer Company, and J. Wohlgemut, used aspirin first in the treatment of rheumatic disease. Hoffman's father was being treated with sodium salicylate for his pain, but he did not tolerate the drug well. His son changed the therapy to aspirin, which appeared to be better tolerated and more effective. This initiated the use of aspirin in Europe and soon its popularity in America was demonstrated by its rapid replacement of the other analgesics such as antipyrine, aminopyrine and acetanilid and phenacetin. Indeed, at the present time, it is estimated that the American public consumes daily more than 20 tons of aspirin in various dosage forms. Most of this aspirin is taken in the form of OTC products without medical advice.

It has often been said, "Drugs are like the finger of God, they can heal and they can smite." Seldom does one find an effective drug without side-effects. And the skillful physician always weighs the therapeutic merit of the drug against the anticipated side-effects. Weighed in this balance, aspirin is one of the most remarkable drugs used in the treatment of symptoms and disease.

For example, on the "heal" pan of the scale, aspirin is a specific drug in the treatment of rheumatic fever. It is an analgesic in the neuromuscular pains of grippal conditions. Aspirin is a dependable antipyretic and anti-inflammatory agent. The analgesic and anti-inflammatory properties make the drug useful in the prolonged treatment of mild arthritic states. Adding additional smaller weight to the "heal" pan is the fact that aspirin in large doses evokes hypoglycemia and hypocholesterolemia. Besides, there is some indication that its action upon the platelets of blood, preventing their aggregation, is effective in the prevention of cardiovascular problems such as heart attack.

Now, on the "smite" pan of the balance, one finds that in susceptible people, aspirin produces gastric discomfort and possibly bleeding from the gastric mucosa. It has been estimated by Levy (1974) that the incidence of gastric bleeding among heavy aspirin users is about 0.015 percent. Allergic response to aspirin is rare. Aspirin is toxic in massive doses. Generally this occurs in children and is due to massive doses of candy or adult aspirin. It appears therefore, that the predominating untoward side-effect of aspirin is gastric discomfort with or without gastric mucosal bleeding. Let us look back over the three-quarters of the past century and learn what Dr. Julius Wohlgemut, who was one of the first two to use the drug, had to say about it.

The drug is best given in solution. Since it is insoluble in water he suggested the use of alcohol to facilitate the solubility. Also, in the pre-aspirin era, when sodium salicylate was the drug of choice in rheumatic disease, it was generally given in much water along with sodium bicarbonate. Following the advice of our forebears, it is prudent to take aspirin, well buffered and dissolved in water. Fortunately the former facilitates the latter in effervescent preparations. Smith, Paul (1957) stated, "Medicine and the world at large are fortunate to have found such a drug."

The NACDS-Lilly Digest

Current Trends in Chain Pharmacy Operations

Results of the *NACDS-Lilly Digest* for 1974, recently released, show that prescription sales in chain drugstore units amounted to $195,675 or 16.5% of total sales, up from 16.1% the previous year and the highest since the first *NACDS-Lilly Digest* was published in 1971. Sales of other merchandise totaled $986,959 — the remaining 83.5% of the total which averaged $1,182,634 per store, or 11.8% over 1973. This was higher than the average annual sales growth of 8.6% recorded since the chain pharmacy study was first published. A total of 1,461 pharmacies participated in the 1974 survey.

In a period of very high inflation, the average chain unit showed an increase of only 0.1% in the cost-of-goods-sold — to 71.9% of sales. At the same time, a 0.3% decrease in total expenses was recorded, as a result of which net profit before taxes rose from 4.6% to 4.8% of sales. Dollarwise, net profit went from $48,555 per unit to $56,546, an increase of $16.5%. However, because of a reduction in total expenses as a percentage of sales, net profit was up 0.2% over 1973.

Other highlights of the *NACDS-Lilly Digest* for 1974: Manager's salary averaged $24,178 (2.0%) vs $19,373 (1.8%) in 1973; employees' wages amounted to $110,880 (9.4%) vs $103,024 (9.7%); and rent was $32,588 (2.8%) vs $30,244 (2.9%). Total expenses per store in 1974 amounted to $276,267 or 23.3% compared to $250,023 or 23.6% the year before.

BALTIMORE METROPOLITAN PHARMACEUTICAL ASSOCIATION 60th ANNUAL BANQUET

The Baltimore Metropolitan Pharmaceutical Association held its 60th Annual Banquet and Dance on Sunday evening, February 8, 1976, at the Blue Crest North on Reisterstown Road in Pikesville.

John E. Padousis, President of B.M.P.A., opened the evening and welcomed the guests after which George J. Stiffman, Past Vice President of B.M.P.A., delivered the Invocation.

B.M.P.A. Vice President and Banquet Chairman Stanley J. Yaffe served as Toastmaster for the evening.

The installation of Officers and the Executive Committee for 1976 followed: Mark J. Golibart, Honorary President; Ronald A. Lubman, President; Stanley J. Yaffe, President Elect; Samuel Lichter, Ralph T. Quarles, and Milton C. Sappe, Vice Presidents; Nathan I. Gruz, Executive Director; Charles E. Spigelmire, Treasurer; and John E. Padousis, Chairman of the Executive Committee.

Executive Committee are: Elwin H. Alpern, Barry L. Bloom, James B. Culp, Jr., Marvin A. Friedman, Barry E. Levin, Martin B. Mintz, Richard E. Myers and Bernard N. White.

Following the installation, new president Ronald A. Lubman delivered a brief address after which Mark J. Golibart, a long time representative of Abbott Laboratories, was presented with the Honorary President's Plaque by Nathan I. Gruz, Executive Director of the B.M.P.A. and the Maryland Pharmaceutical Association.

Mr. Lubman then presented the first AID Drug Stores Award, "In recognition of his outstanding contribution to pharmacy in the State of Maryland", to Charles E. Spigelmire, Treasurer of the B.M.P.A. John E. Padousis received the Past President's Plaque from Toastmaster Yaffe.

After the distribution of awards and prizes, B.M.P.A. members and their guests enjoyed an evening of dancing to the music of Al Miller's Orchestra.

Serving on the Banquet and Dance Committee were: Stanley J. Yaffe, Committee Chairman; Milton C. Sappe, Ticket Chairman; Ronald Lubman, Charles E. Spigelmire, John E. Padousis and Nathan I. Gruz.

Photos By Paramount Photo Service

(Upper) John E. Padousis (right) receives the Past President's Plaque from Stanley J. Yaffe, Banquet Chairman.

(Center) Charles E. Spigelmire (right) receives the AID Award from Ronald A. Lubman, newly elected President of the Baltimore Metropolitan Pharmaceutical Association.

(Lower) Mark J. Golibart (left) of Abbot Laboratories receives the Honorary President's Plaque of B.M.P.A. from Nathan I. Gruz, Executive Director, B.M.P.A. and MPhA.

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It's the A-200 Pyrinate® Lice Alert Hotline.

The sooner a lice outbreak is recognized, the easier it is to stop. So when lice strike in your area, strike back! Call us toll free at the Hotline Number 800-431-1140. Once the outbreak is verified, we'll swing into action with a whole program designed to stop an outbreak before it gets rolling.

We'll send you a Lice Epidemic Kit to help combat the outbreak. Kit contains patient literature, instruction pad printed in both English and Spanish, diagnosis and treatment file card, and 2′ x 3′ lice wall poster.

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If we all work together, we can beat this lice problem. First step is to contact the A-200 Pyrinate Lice Alert Hotline Number, 800-431-1140. A good deal for your town. A great deal for you.

Note: When you call please give us your name, professional title, address, name and phone number of local health officer, and details of outbreak.

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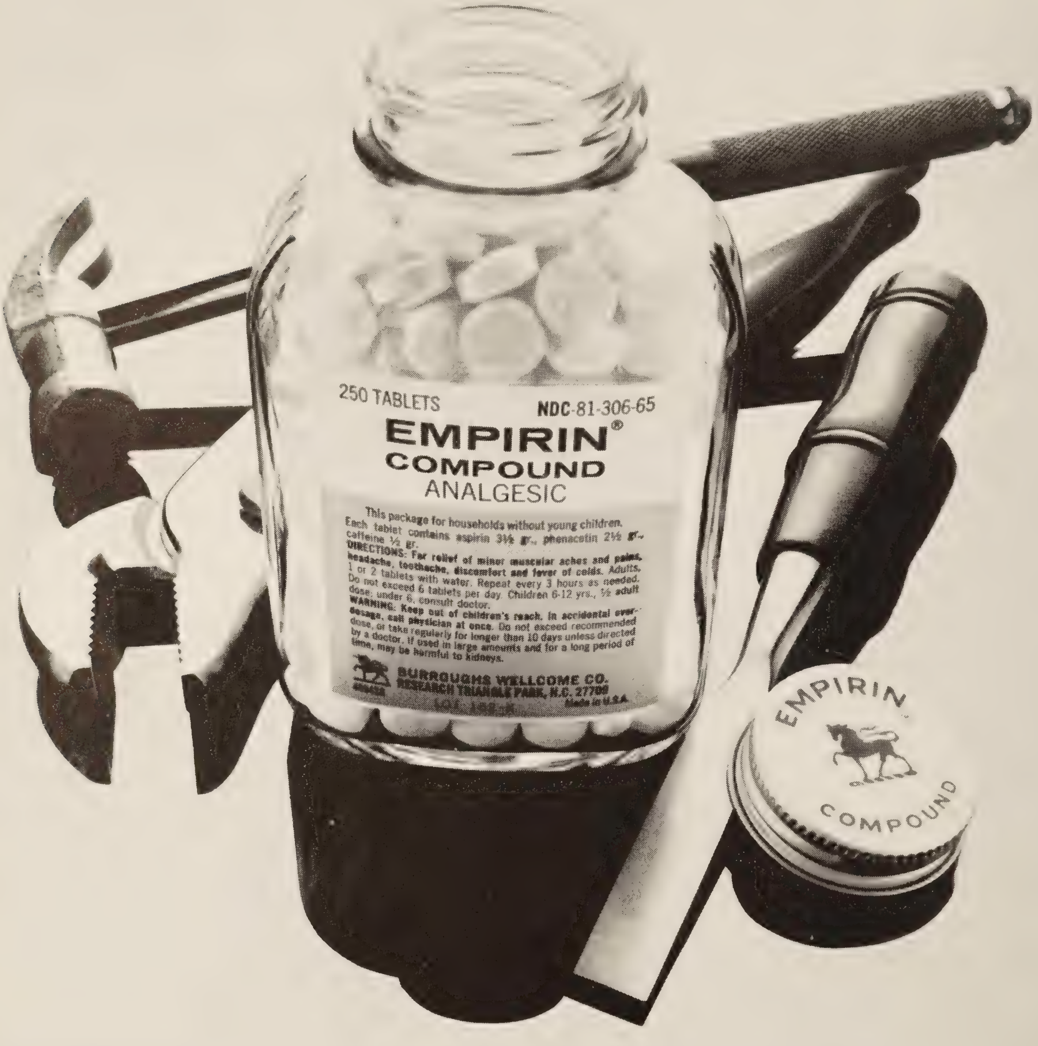
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news

Second USP — NF Supplement Published

The United States Pharmacopeial Convention, Inc. has published a Second Cumulative Supplement to USP XIX and NF XIV. This combined USP and NF Supplement is arranged in a single, composite listing which emphasizes the unification of the official compendia. Pursuant to the acquisition of the National Formulary as of January 2, 1975, responsibility for all NF XIV supplements and for all future NF editions resides within the Pharmacopeial organization.

Holders of the main volume of USP XIX and NF XIV will need only one copy of the Second Supplement to bring both books up to date. The Second Supplement will be cumulative and therefore supersedes entirely both the First Supplement and First IRA. All revisions in the Second Supplement are official as of May 1, 1976, except where otherwise noted.

Dispensing information similar to that given in USP XIX monographs of drugs dispensed directly by pharmacists to patients is provided for all comparable NF drugs.

The Supplement provides a total of 34 new USP XIX monographs, of which 7 are new in the Second Supplement, and a total of 26 new NF XIV monographs, of which one is new with this supplement. The revisions included pertain to 271 USP XIX and 395 NF XIV monographs; 13 USP XIX and 3 NF XIV general chapters; 34 USP XIX and 24 NF XIV reagent specifications; and one NF XIV reference table. No new changes in the General Notices have been made. In all, the Supplement covers 802 compendial titles, of which 476 represent changes newly adopted with the Second Supplement.

Comprising about 140 pages, 8¼″ × 11¼″, the Second Supplement will include the rosters of the USPC officers and board, the USP Committee of Revision and its Subcommittees, and the current USPC Constitution and Bylaws.

The revisions in the Second Supplement were subjected to pubic review while they were being considered by the USP Committee of Revision through publication in the bimonthly *Pharmacopeial Forum*, the journal of drug standards development and official compendia revision. The wide access to the USP and NF revision process provided by *Pharmacopeial Forum* affords broad participation by medical, pharmacy, and allied sciences experts throughout the nation and aids the USP Committee of Revision in its scientific studies and deliberations.

The Second Supplement is available at $3.00 per copy (cash with order), from the USP Convention, Inc., 12601 Twinbrook Parkway, Rockville, Maryalnd 20852. The price of USP XIX was increased a like amount to $28.00 on January 1, 1976 and purchasers of USP XIX after that date are entitled to a free copy of the Second Supplement when they return the supplement card on the front flap of the USP XIX book jacket.

Annual Supplements are anticipated during the 1975-1980 lustrum. As a convenience to purchasers to reduce the cost of individual orders and to insure that all Supplements are received promptly as published, a Lustrum Plan has been initiated whereby purchasers may subscribe to the Second and all succeeding Supplements now for a total of $12.

NEW MEMBERS

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Herbert Wienner, Baltimore
Robert Baxter, Pasadena
Irwin Sealfon, Silver Spring
Joseph Breslow, Randallstown
Zach Turner, Baltimore
David Clarke, Towson
Arnold Grabush, Baltimore
Leon Shuster, Baltimore
Dr. Robert Kroopnick, Randallstown
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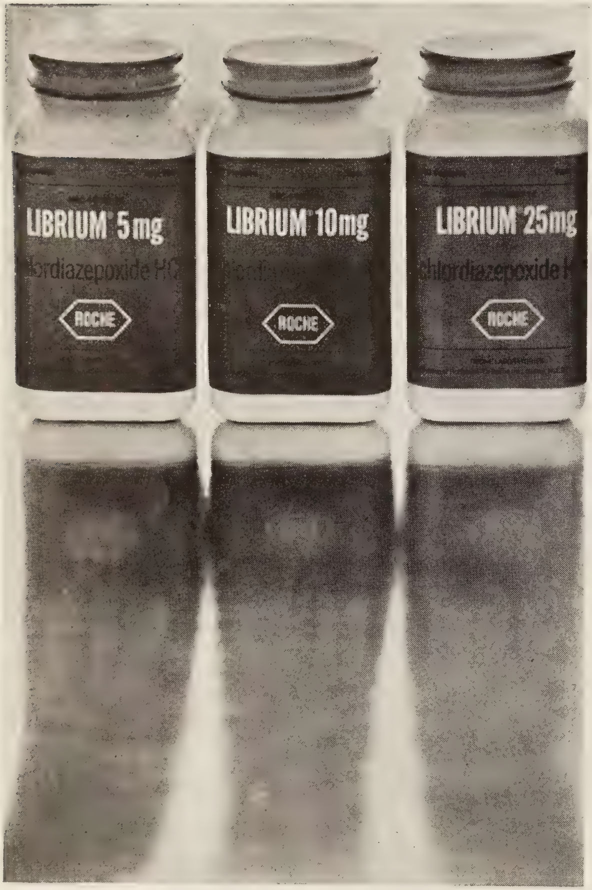

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MEDICAL EMERGENCY LINE

One way Roche provides immediate product information is through the Medical Emergency Line. Roche maintains this direct, 24-hour telephone service (201-235-2355) for specific questions concerning Librium or any other Roche product. For inquiries of lesser urgency, Roche information specialists will supply detailed responses by mail. Of course, your Roche representative is prepared to supply you with a variety of informative materials, such as scientific brochures, reprints and bibliographies related to the pharmacology of Librium (chlordiazepoxide HCl) and its clinical applications.

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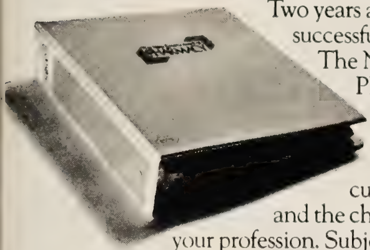
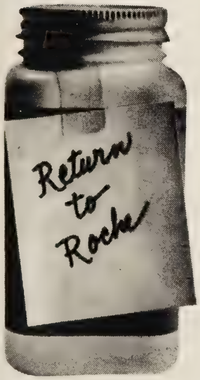


Two years ago we initiated a highly successful educational service — The New Environment of Pharmacy. It was designed by pharmacists for pharmacists. The purpose is to keep you informed of current trends in pharmacy and the changing factors affecting your profession. Subjects covered include new government regulations, drug interactions and new concepts and techniques in pharmacy management. If your pharmacy has not already enrolled in this program, write: The New Environment of Pharmacy, Roche Laboratories, Division of Hoffmann-La Roche Inc., P.O. Box 283, Nutley, New Jersey 07110.



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Although the demand for Librium minimizes expiration problems for this product, Roche continues its policy of expediting replacements of all Roche products that may be outdated or discontinued. This liberal policy enables you, as a busy pharmacist, to keep your stock up to date and to maintain a proper inventory.

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chlordiazepoxide HCl/Roche®

5 mg, 10 mg, 25 mg capsules

FOR ALL THE PROFESSIONAL REASONS.

Please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Tuberculosis In Baltimore

Baltimore's tuberculosis rate, the second worst in the nation in 1974 (only Honolulu was higher), is expected to be six times higher than the national average this year. While the national TB rate is about 16 new cases per 100,000 population, the city's projected rate for 1975 is 83 new cases per 100,000. The state's TB rate is 29 new cases per 100,000.

State officials believe the restricted use of Isoniazid (INH) has been a factor in Baltimore's dramatic increase in the disease in the past three years. Isoniazid is used for preventive therapy of tuberculosis in a single dose of 300 mg per day for adults and 10 mg per kg body weight per day, not to exceed 300 mg per day, for children, to be administered in a single dose over a period of 12 months. A larger dose or longer period of time is not required. INH is inexpensive, administered orally, and easy to take. As of now, no other drug has been demonstrated to be effective for preventive therapy.

It is now apparent that mild hepatic dysfunction, evidenced by elevation of serum aminotransferase (transaminase) activity, occurs in 10 to 20 per cent of persons taking INH. This abnormality usually occurs in the first 4 to 6 months of treatment but can occur at any time during therapy. In most instances, enzyme levels return to normal with no necessity to discontinue medication. In occasional instances, progressive liver damage occurs and presents symptoms; the drug should be discontinued immediately in these cases. The frequency of progressive liver damage increases with age. It is rare in individuals under age 20. The observed frequency in other age groups is as follows: ages 20-34, up to 0.3 per cent; ages 35-49, up to 1.2 per cent; 50 years and more, up to 2.3 per cent.

It must be remembered that the chance of developing INH-associated liver disease exists only during the year of preventive therapy, whereas the risk of developing tuberculous disease is present for life. It is to diminish the risk of developing tuberculosis, with possible transmission of infection, that INH is recommended for persons infected with *M. tuberculosis.* U.S. Public Health Service studies have demonstrated that the protection of one year of preventive therapy for those at risk of developing tuberculous disease continues for many years and may well be lifelong. Up to 15 years of follow-up of groups of people given preventive therapy with INH has revealed no evidence of delayed deleterious effect. The recommendations outlined below for the use of INH with appropriate safeguards are based on a comparison of the risk of hepatic injury with the benefit of preventive therapy.

Persons for whom preventive therapy is recommended: every positive tuberculin skin test reactor is at some risk of developing tuberculous disease and can benefit from preventive therapy. Since the risk of developing disease is lifelong, the benefit from preventive therapy is greater the younger the age and the longer the life expectancy. Hepatitis, the most serious complication of INH therapy, increases with age. The risk of hepatitis is exceedingly low in the less than age 20 group and reaches a peak among persons more than 50 years of age.

Priorities must be set for preventive therapy, taking into consideration not only the risk of developing tuberculosis compared with the risk of INH *toxicity,* but also the ease of identifying and supervising persons for whom preventive therapy is indicated, and their likelihood of infecting others.

The following groups are listed in order of priority: 1. Household members and other close associates of persons with recently diagnosed tuberculous disease. 2. Positive tuberculin skin test reactors with findings on the chest roentgenogram consistent with non-progressive tuberculous disease, in whom there are neither positive bacteriologic findings nor a history of adequate chemotherapy. 3. Newly infected persons. 4. Positive tuberculin skin test reactors in the special clinical situations described below. 5. Other positive tuberculin skin test reactors. The risk of tuberculosis is highest in infancy, high again in adolescence and early adult life, and continues at a lower rate for a lifetime.

Preventive therapy for tuberculosis infection with INH is an effective tool in tuberculosis control. It is a preventive health measure which benefits the infected person as well as a valid public health measure for the community. Its continued use should be encouraged.

Ref:

1. Official Statement of the American Thoracic Society. *Amer. Rev. Resp. Dis.,* Vol. 110, 1974, pp. 371-374.
2. Isoniazid Prophylaxis and Deaths in Baltimore, 1972, *Md. State Med. J.,* Nov., 1974, pp. 64-67.

Tuberculosis Misunderstood

It is easy to understand why people believe tuberculosis is a highly contagious disease. A TB patient's every cough contains hundreds of droplets carrying germs. But the large droplets, called fomites, are not considered to be a significant way of spreading tuberculosis. The big droplets are usually too big to breathe in and they eventually dry up wherever they land. TB is almost impossible to catch simply by touching the germ. In over 99 per cent of cases, it is breathed in.

It is the little droplets showered out in a cough that are the problem. The average TB patient, according to Dr. M. Susan Bollinger, Medical Director at the Mount Wilson Sanitarium, coughs out 465 of these droplets with every cough, and more than half are still suspended in the air half an hour later. The average cough comes four times an hour, for about 2,000 droplets an hour or 45,000 in a 24-hour period. But it takes, on the average, the breathing in of about 25,000 cubic feet of air to get enough droplets into the respiratory tract to settle and begin to cause infection. The more air that the TB patient coughs into, the less likely it is that anyone around will catch the disease.

Reprinted with permission from: *Pharmacy Bulletin,* 122, December, 1975, The Union Memorial Hospital, Baltimore, Maryland.

obituaries

MRS. MARY F. DuMEZ

Mrs. Mary F. DuMez, 86, widow of Dr. Andrew G. DuMez, who served as Dean of the University of Maryland School of Pharmacy from 1926 to 1948, died on January 29 in Hot Springs, Arkansas, where she was visiting. Dr. Dumez, who was the first person to receive a Ph.D. in pharmacy (University of Wisconsin, 1917) in the United States (although earlier doctoral degrees had been awarded for work in pharmaceutical chemistry), died in 1948.

The former Mary Fields was a native of Indiana. She attended college in Boston, where she majored in physical education. After receiving her B.A. degree, she taught at Oklahoma State University where she met her husband.

Soon after their marriage, Dr. and Mrs. DuMez went to the Philippine Islands. There, Dr. DuMez helped to found the College of Pharmacy of the University of the Philippines.

Upon the couple's return to the United States, Dr. DuMez worked in the Hygienic Laboratory of the United States Public Health Service.

Mrs. DuMez was active in many local and national pharmaceutical organizations.

She was honorary president of the Ladies Auxiliary of the Maryland Pharmaceutical Association, the Women's Auxiliary of the American Pharmaceutical Association and the Alumni Association of the University of Maryland School of Pharmacy.

For many years, Mrs. DuMez had led a dedicated personal drive for support of the Hugh Mercer Apothecary Shop in Fredericksburg, Virginia. She served on the board of managers of Friends of Historical Pharmacy, Inc., which manages the operation of the "shop", occupying the offices of first and second vice president and president. She was honored with a plaque and tribute at the Auxiliary brunch during the APhA Annual Meeting in Houston in 1972. In his tribute to Mrs. DuMez, Dr. Milton Neuroth, president of Friends of Historical Pharmacy, said, "The years of devotion on the part of Mrs. DuMez to the operation of the Hugh Mercer Apothecary Shop are a contribution of unusual significance to this shrine to American Pharmacy and Medicine, and to the pleasure of tourists and visitors, including the thousands of school children."

Mrs. DuMez also had served on the APhA Auxiliary Board and had been active in many Auxiliary activities.

Mrs. DuMez was a long time member of the American Institute of the History of Pharmacy. In her will, Mrs. DuMez left a $5,000 bequest to the Institute. In 1972 she received a Certificate of Commendation from the AIHP for "her efforts extending over more than two decades to maintain the historic Hugh Mercer Apothecary Shop."

In addition, she held membership in the Camp and Hospital Service of the American Red Cross, the Council of State Mental Hospitals Association, the Women's Club of Roland Park and was past president of the Women's City Club.

Mrs. DuMez also served as a member of the Maryland Council of State Mental Hospital Auxiliaries and coordinator of volunteer services for Rosewood State Hospital.

She had moved to Rochester, Minnesota four years ago.

A graveside service was held February 11 at the Green Mount Cemetery in Baltimore, where she was interred.

There are no survivors.

Israel (Doc) Baker, 74, graduate of University of Maryland School of Pharmacy, at Washington Hospital Center, died March 16.

Sister Mary Carmel Clarke, 77, retired chief pharmacist of Mercy Hospital and 1934 graduate of the University of Maryland, died March 17.

DEA Lists Procedure for Disposal of Controlled Substances

The Drug Enforcement Administration (DEA) has reemphasized that a pharmacist wishing to dispose of any excess or undesired stocks of controlled substances must contact the nearest regional or district office of DEA and request Form 41. The regional director will authorize the pharmacist to use one of the following means of disposal: (1) transfer to an authorized registrant; (2) delivery to a DEA agent or to the nearest DEA office; (3) destruction in the presence of a DEA agent or other authorized person; or (4) any other means determined by the regional director.

Institutional pharmacists are cautioned not to allow unwanted controlled drugs to accumulate in the pharmacy.

Court Upholds Ruling on Methadone

A federal Circuit Court upheld the decision of a lower court that the FDA does not have authority to restrict the dispensing of methadone for approved uses to certain types of pharmacies. The FDA had proposed in 1972 that the dispensing of methadone for analgesic use be restricted to hospital pharmacies and a few community pharmacies in remote areas. In a challenge from the American Pharmaceutical Association, a federal judge ruled that Congress had not given the FDA authority to impose such a restriction. This ruling has now been upheld.

When this regulation was proposed, the American Society of Hospital Pharmacists submitted a statement objecting to the withdrawal of methadone from pharmacies that do not dispense it solely as part of an approved treatment program.

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Alpha-hemolytic streptococci (viridans group)—Short-term prophylaxis of bacterial endocarditis prior to dental or other operative procedures in patients with a history of rheumatic fever or congenital heart disease who are hypersensitive to penicillin.

S. aureus—Acute infections of skin and soft tissue of mild to moderate severity. Resistant organisms may emerge during treatment.

S. pneumoniae (D. pneumoniae)—Upper and lower respiratory tract infections of mild to moderate degree.

M. pneumoniae—For respiratory infections due to this organism.

Hemophilus influenzae: For upper respiratory tract infections of mild to moderate severity when used concomitantly with adequate doses of sulfonamides. Not all strains of this organism are susceptible at the erythromycin concentrations ordinarily achieved (see appropriate sulfonamide labeling for prescribing information).

Treponema pallidum—As an alternate treatment in patients allergic to penicillin.

C. diphtheriae and *C. minutissimum*—As an adjunct to antitoxin. In the treatment of erythrasma.

Entamoeba histolytica—In the treatment of intestinal amebiasis.

L. monocytogenes—Infections due to this organism.

Establish susceptibility of pathogens to erythromycin, particularly when *S. aureus* is isolated.

Contraindications: Known hypersensitivity to erythromycin.

Warnings: Safety for use in pregnancy has not been established.

Precautions: Exercise caution in administering to patients with impaired hepatic function. Surgical procedures should be performed when indicated.

Adverse Reactions: Dose-related abdominal cramping and discomfort. Nausea, vomiting, and diarrhea infrequently occur. During prolonged or repeated therapy, there is a possibility of overgrowth of non-susceptible bacteria or fungi. Mild allergic reactions such as urticaria and other skin rashes may occur. Serious allergic reactions, including anaphylaxis, have been reported.

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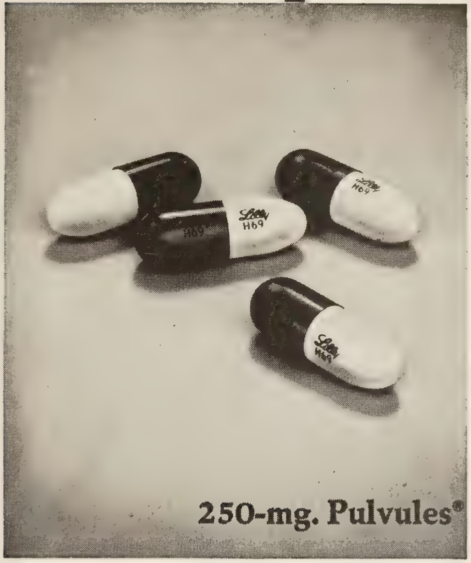

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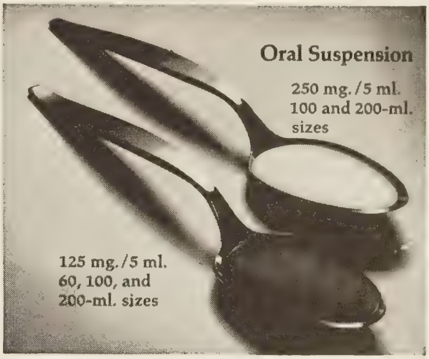

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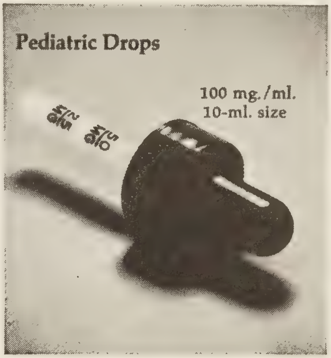

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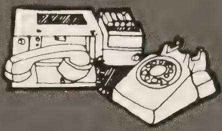

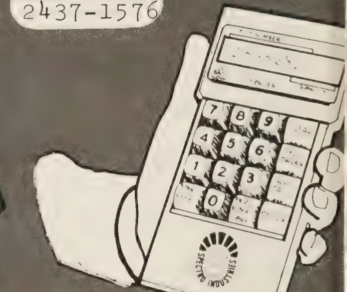

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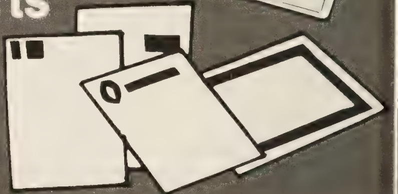

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editorial

RELUCTANT PARTNERS: GOVERNMENT AND PHARMACY MPhA RESPONSE TO MAC-EAC

Governmental involvement in health care to properly secure more effective delivery of health services or to meet unmet needs of people is understood and accepted by most of us. But when laws and regulations result in onerous, costly, time-consuming administrative burdens without commensurate compensation to the professionals who provide health services and products, then we must rebel in our own enlightened self-interest. We must uncompromisingly proceed to secure redress of our grievances using every possible lawful remedy — administrative, legislative or through the courts if necessary.

Most important, both government and health care providers must ask: how will the new governmental requirements affect *patient care?*

The impact of the MAC-EAC (Maximum Allowable Costs and Estimated Acquisition Costs) regulations based on arbitrary federal requirements along with unrealistic, unreasonable state implementation, if put into effect as proposed, would have resulted in a decrease in the already low, inequitable remuneration to pharmacists for dispensing Medicaid prescriptions. The inevitable result would be fewer pharmacies participating in Medicaid especially in many areas where the poor and elderly reside in large numbers.

Fortunately, the Maryland Pharmaceutical Association with the assistance of PHARMPAC — the political action arm of pharmacy in Maryland — has been responsive to the urgent needs of pharmacists. MPhA has been holding almost weekly meetings with Medicaid officials. Special legal counsel with particular expertise in administrative and regulatory law has been retained to augment MPhA's legal counsel.

Results? We have concrete results!

First, implementation of MAC-EAC in Maryland has been postponed.

Second, the State Medicaid Administration has agreed to confer with MPhA Committee on Medicaid on all aspects of Medicaid regulations and any proposals for change.

Third, price lists for computer input as price ceilings will be reviewed by MPhA for validity, reasonableness and whether up-to-date as to price changes.

Fourth, the state has agreed to conduct a survey of prescription dispensing costs and to receive data from MPhA. Medicaid staff has pledged its cooperation in developing the information necessary to determine what is an equitable prescription fee and to initiate appropriate action based on relevant documentation.

The profession can be proud of the leadership of MPhA officers, Board of Trustees and its Medicaid Committee in achieving these results. It has been based upon the solid support of a large percentage of pharmacists and of management in all sectors of pharmacy.

Let us hope this evidence of cooperation and harmony will prevail in meeting other problems we face now and in the days ahead.

— *Nathan I. Gruz*

MAC/EAC
What You Can Do—Now!

The real significance of the final nature of MAC/EAC regulations is the impact on the non-governmental third party plans. As some form of NHI (National Health Insurance) is inevitable within the next few years, the pattern for Rx services reimbursement will surely be influenced by the kind of policies adopted today for Medicare and Medicaid.

Be wise — give your Association and your representatives who deal with government and third party insurers the tools to work . . .

1. Make sure you and all your associates and staff are *paid up* members of MPhA — so that we speak on the basis of the largest possible number of *concerned* persons. Are *your* suppliers and their representatives sustaining, affiliate or associate members?
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April 1, 1976

The meeting was called to order at the Kelly Memorial Building by Chairman Freiman at 11:00 P.M.

Communications received included:

- Letter from Governor Mandel to Director Gruz in response to recommendations on Medicaid Cost Containment;
- Letter from Dr. A. M. McConehey notifying us of death of Mrs. Andrew G. DuMex, widow of the late Dean DuMez; and
- Letter of resignation from Trustee Rudolph Winternitz because of conflict in schedule. The resignation was accepted by the Board with regrets.
- President's Report — President Seidman suggested a different format for Board meetings in the future in Annapolis. Reported on his attendance at the Anne Arundel County Pharmaceutical Association Installation meeting and his address to a general meeting of the group. He also met with the President of MSHP. He announced the appointment of a School of Pharmacy Committee. The Board approved the appointments subject to acceptance by appointees. Normand Pelissier was recommended to replace Mary Connelly who resigned from the Tripartite Committee because of inability to attend. The appointment was approved.
- Treasurer's Report — The Treasurer's report was presented and accepted. Dues for the 1976 year are running ahead of the previous year.
- Executive Director's Report — The priority was legislative activity including meetings, hearings in Annapolis and legislative contacts. Activities included: installation of the officers at the Anne Arundel County Pharmaceutical Association annual meeting; the BMPA meeting on Medicaid and HMO's and the BUST program; Membership/Convention committees; NARD legislative conference with the highlight being open forum with HEW officials concerned with the MAC program; along with Mr. Rubin, conferred with Dr. Apple at APhA on MAC. Mr. Gruz was invited by PMA to attend a conference at Burroughs Wellcome in North Carolina on Industry-Pharmacy Relations. Contacted by the Maryland Nurses Association regarding problems with Baltimore City Health Department and reconstitution of drugs. Received copy of letter from Attorney General's office to Board of Pharmacy Secretary Tregoe emphasizing that the prohibition of prescription advertising is still in effect in Maryland and compliance was required.
- The paid up membership is 136 ahead of the previous year.
- Convention and Trips — The status of the San Francisco/Las Vegas Seminar Tour was reported on. Work is proceeding on the 1976 Convention and sites for 1977 in Ocean City and Tamiment are being considered.
- Legislative Committee Report — Chairman Richard Parker reported on the status of bills which had been presented at the Legislative Committee prior to the Board of Trustees meeting. HB 1306 on Continuing Education — amendments were being sought to make the effective date July 1, 1977. Qualifying amendment will also be offered on HB 1291 to permit copies to be transmitted between pharmacists.
- School of Pharmacy Report — Dean Kinnard reported that a major planning process was launched in light of the Millis Report. There is a mandate from the University to set up management procedures and identifying the lowest 10% of priority because of budget problems. Donald Fedder has been appointed as Co-ordinator of Community Pharmacy of programs expanding his time from one-half to three-quarters time. There will be a placement service for pharmacists. Mr. Fedder will set up an intradisciplinary course in Orthotics. There will be a new program in adult primary health care on the campus involving all of the schools. Dr. David Knapp was appointed to the Maryland Medical Assistance Advisory Committee. Secretary of Health Neil Solomon has been asked to set up a Commission to study pharmacy in state hospitals. The Dean assumes the Presidency of AACP in July. He pointed to the need for work in APhA-AACP relations. He also requested input from Trustees for consideration by AACP.
- HMOs — Mr. Rubin moved that MPhA representatives meet with the Maryland Senators and Congressman to secure assistance for freedom of choice of pharmacy in HMOs. Seconded and passed.

- Medicaid Cost Containment and Medical Assistance Program — There was a discussion of the effects of 50¢ co-pay and elimination of OTC drugs and of action by MPhA.
- MAC-EAC — The consensus was to seek a meeting with state Medicaid officials, particularly Messrs. Kent and Eshelman, regarding a procedure for the updating of prices before implementation.
- Board of Pharmacy — Mr. Snyder announced that the Board was supporting the Patient Profiles bill and spoke of the budgetary problems developing from Division of Drug Control personnel no longer being available. There is no one serving as Secretary of the Board.
- MPhA guidelines on Patient Profiles — On motion of Mr. Seidman, duly seconded, the guidelines previously distributed were approved as a standard of practice for pharmacy in Maryland.
- Poison Prevention Week — Mr. Gruz reported on the plans for observance of Poison Prevention Week which included APhA posters, "Mr Yuk" counter display, TV and radio publicity.
- Meeting adjourned at 3:00 P.M.

New Members

The following is a list of the new members approved at the March 4, 1976 meeting of the Board of Trustees of the Maryland Pharmaceutical Association.

William Barnett, Rockville, Peoples Drug #20
James Gundling, Crisfield, Kent Pharmacy
Gerard Eugene, Beltsville
Harvey Basik, Baltimore, Keystone Pharmacy
Seymour Sattin, Hyattsville, University Drugs
Marvin Anshell, Baltimore, Crestlyn Pharmacy

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MPhA To Hold 94th Annual Convention on June 20-23rd in Ocean City

The 94th Annual Convention of the Maryland Pharmaceutical Association will be held this year on Sunday, June 20 through Wednesday, June 23 at the Sheraton Fontainebleau, 10100 Ocean Highway (on the boardwalk) in Ocean City, Maryland.

Co-sponsored by the Ladies and Travelers Auxiliaries of the Maryland Pharmaceutical Association, the Convention will open with a welcoming cocktail party and reception on Sunday evening, June 20 at 9:30 p.m.

Monday morning, June 21 will be devoted to a General Session of the MPhA from 9:00 a.m. to 11:00 a.m. consisting of a meeting of the MPhA House of Delegates, officer's reports, and a report from the Maryland Board of Pharmacy.

A Brunch, meeting, and Fashion Show will be held simultaneously for LAMPA (the Ladies Auxiliary) from 10:00 a.m. to 12:30 p.m.

TAMPA (the Travelers Auxiliary) of the MPhA will also be holding their annual meeting from 10:00 a.m. to 12:30 p.m.

At 12:30 p.m. on Monday afternoon a Bicentennial Program will be presented for all on "The Apothecary and Practice of Medicine in Colonial Times" featuring Morris L. Cooper, Curator of the B. Olive Cole Pharmacy Museum in the Kelly Memorial Building on the campus of the University of Maryland in Baltimore. In addition to his lecture, Mr. Cooper will present a slide presentation depicting the early practice of pharmacy in the United States.

Following Mr. Cooper's program the remainder of the day will be devoted to leisure time allowing the members to take advantage of the numerous recreational facilities available at special rates. In addition to the regular Ocean City facilities and amusements, indoor-outdoor swimming pools, tennis courts, sauna and exercise rooms will be available. Special rates will also be available for those who would like to spend the afternoon playing golf or deep sea fishing. Arrangements have also been made by the Association to sponsor daily supervised programs for the children of attendees.

At 6:30 p.m. TAMPA will sponsor a "Crabfeast" and Square Dance at the Berlin Fire Hall.

On Tuesday morning, June 22, the MPhA House of Delegates will hold its second session starting at 9:00 a.m. during which the assembly will conduct the election of Nominees to the State Board of Pharmacy and the nomination of Officers and Trustees. This second and final session of the House of Delegates will be followed by a Cocktail Party at 6:00 p.m. after which there will be a banquet and dance starting at 7:00 p.m.

The final day of the Convention, Wednesday, June 23 will be devoted to the MPhA's Continuing Education Program which will be conducted from 9:00 a.m. until 12 noon. As part of the Association's program of Continuing Education a seminar will be presented on "Understanding and Using Bioavailability Information: An Action Seminar". The Seminar and workshops will be conducted by Richard A. Penna, APhA Assistant Executive Director for Pharmaceutical Affairs, and Dr. William F. McGhan, Executive Secretary, APhA Academy of Pharmaceutical Sciences.

All MPhA members who are planning to attend this year's convention are urged to register and insure their reservations early. Reservations can only be guaranteed if received by Friday, June 4th.

All attendees for the educational, social, entertainment, recreational and food functions must be registered.

The registration fees for this year's convention are as follows:

PACKAGE AND INDIVIDUAL CHARGES

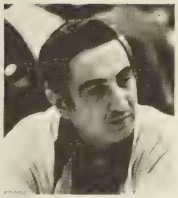
Pharmacist Registration — $45.00
Ladies — $40.00
Sunday Cocktail Party — $10.00
Monday LAMPA Brunch — $7.00
Monday Crabfeast and Dance — $10.00
Children's Crabfeast — $3.50
Non-pharmacist Registration without C.E. programs — $35.00
Tuesday Reception, Banquet and Dance — $20.00
Wednesday Continuing Education Program — $10.00
Children's Banquet — $8.50
Pharmacy Students — $20.00

All checks for registration should be made payable to the Maryland Pharmaceutical Association, 650 West Lombard Street, Baltimore, Maryland 21201.

Remember to register early because accommodations will be limited. Reservations can only be guaranteed if received by Friday, June 4th.

RAY HECKMAN

DENNIS CRAWFORD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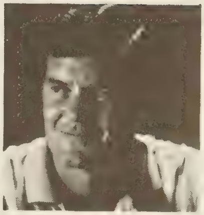
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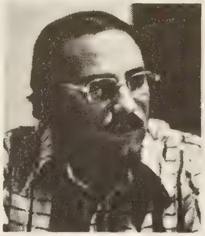
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ANNUAL ROBERT L. SWAIN PHARMACY SEMINAR

The Maryland Pharmaceutical Association sponsored the Fifteenth Annual Robert L. Swain Pharmacy Seminar as part of its Continuing Education Program on Thursday, March 18, 1976 at the Quality Inn, Towson, Maryland.

The seminar, which was chaired by Dr. C. Jelleff Carr, was conducted from 8:30 a.m. to 4:30 p.m. and covered a wide range of topics in several areas of pharmaceutical interest.

Dr. Maven J. Myers, Professor of Pharmacy Administration at the Philadelphia College of Pharmacy and Science, discussed the role and ramifications of proper administrative procedures in "Patient Medication Records — An Overview". Dr. George F. Archambault, Pharmacy and Drug Distribution Systems, and former Pharmacy Liaison Officer with the Office of the Surgeon General, United States Public Health Service, lectured on the "Legal Aspects and Impacts" of the pharmaceutical profession.

Dr. Ronald Goldner, a practicing dermatologist, addressed the assembly on the dangers and diversities of patient reactions with his lecture on the "Allergic Responses to Drugs".

A luncheon followed with an interesting discussion by Dr. John C. Krantz, Jr., Professor Emeritus of Pharmacology at the University of Maryland School of Medicine, who outlined briefly his "Bicentennial Observations on the History of Pharmacy". Dr. Krantz's observations were complemented by the showing of a documentary film entitled: "The Heartbeat of the People — William Withering and Digitalis". Dr. Krantz served as Executive Producer of the film.

The remainder of the seminar was devoted to a panel and open discussion on "The Pharmacist's Responsibilities in Patient Information". Donald O. Fedder, Coordinator of Community Pharmacy Programs and Instructor at the University of Maryland School of Pharmacy, served as moderator of the discussion. Among the panelists were Paul Freiman, community practice; Max Ray, Pharm. D., Director of Clinical Services, American Society of Hospital Pharmacists; Emanuel Richman, Professional Services, Giant Food Pharmacies. Also participating were Dr. Maven J. Myers, Dr. George F. Archambault, and Dr. Ronald Goldner.

Serving on the Seminar Committee in addition to Dr. Carr were Philip H. Cogan, Paul Freiman, Sol Rosenstein, Henry G. Seidman, Ralph F. Shangraw, PhD., Laura Tepper, Henry Verhulst, and Nathan Gruz.

Seminar Speaker Dr. George F. Archambault (right) with Henry G. Seidman, President of MPhA and Director of Continuing Education at the U. of Md. School of Pharmacy.

Lecturer Dr. John C. Krantz, Jr. (left) with MPhA Executive Director Nathan I. Gruz.

A historic photo at the Swain Seminar — left to right: Dr. James C. Munch, internationally renowned pharmacologist, now retired, with Dr. John C. Krantz, Jr. (center) and Dr. C. Jelleff Carr, Seminar Chairman. Krantz and Carr authored the classic text, "Pharmacologic Principles and Medical Practice.))

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Seminar Panelists: (left to right) Dr. Max Ray, Donald O. Fedder (Moderator), Emanuel Richman and Paul Freiman.

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MPhA POLICY ON PATIENT MEDICATION PROFILES

(Adopted by Board of Trustees March 4, 1976)

Definition

The Patient Medication Proile is a record of information relating to a patient's drug therapy. This profile contributes to better health care by enhancing the ability of the pharmacist to efficiently perform his professional duties.

Purposes

The Patient Medication Profile has, but is not limited to, the following purposes:

1. To provide a medication history on the patient.
2. To provide information regarding the patient's drug utilization, including over-utilization and under-utilization.
3. To provide data to facilitate patient consultation and communication with other health professionals, when the pharmacist has been advised of information related to:
    - a. A record of patient drug allergies, previous idiosyncratic responses and/or other untoward drug effects.
    - b. An record of previously administered drugs which have not been effective.
    - c. Data which will enable the prevention and/or management of drug interactions.

Essential Information

The Patient Medication Profile must include, but is not limited, to the following essential information:

1. Name of patient, 2. Address of patient, 3. Telephone number of patient, 4. Indication of age grouping to include date of birth if under 16 years old or over 65 years old, 5. Prescription number, 6. Date of Service, 7. Drug product name and manufacturer, if appropriate, 8. Dosage form, 9. Strength, 10. Quantity dispensed, 11. Name of prescriber and 12. Initials of pharmacist unless indicated on original Rx.

Patient Profile should also include the following when the pharmacist has been advised of information related to:

1. Previous drug allergies, idiosyncratic reactions and/or untoward drug effects,
2. Disease conditions of the patient,
3. Previous ineffective therapy,
4. Non-prescription medication utilized by the patient.

Implementation and Utilization

1. Patient History — The pharmacist should establish a method for gathering and recording essential patient information. The preferred method of gathering information is a personal interview.
2. Family Profile — While an individual patient profile may be more efficiently utilized, a single profile may be kept for an entire family living in one household provided adequate means are available to readily identify which medication was prescribed for each family member.
3. Profile Utilization — The Patient Medication Profile must be examined by the pharmacist each time a service is performed. A warning system to easily identify a patient as having problems requiring particular attention should be incorporated. Any inconsistency or potential problem detected must be resolved by appropriate action.
4. Confidentiality — The Patient Medication Profile must be afforded the same status of confidentiality as is the prescription order.
5. Communicating the Value — The pharmacist should familiarize the patient and other health care professionals with the benefits that can accrue to the patient through the proper utilization of the Patient Medication Profile.

Practice Management Aspects

The Patient Medication Profile may contain additional features which will aid the pharmacist in the efficient management of his practice. Some examples are:

1. Third party payment information
2. Generation of tax and insurance receipts
3. Identification of prescription order by patient's name
4. Simultaneous production of prescription label
5. Accounting and billing information
6. Delivery instructions
7. Non-health related information about the patient
8. Inventory control

Conclusion

The Patient Medication Profile is an integral component of pharmaceutical service. It is a dynamic tool in the delivery of service, not merely a stagnant record. The profile has become an indispensible aid for pharmacists in their interaction with patients and other health professionals. The increasing trend to multi-disciplinary involvement in health care delivery has placed added emphasis on the use of Patient Medication Profiles by the pharmacist. The information contained in the profile expands the pharmacist's capability to utilize his knowledge, experience and professional judgement in making a significant contribution to patient care.

(Adapted with additions from APhA Academy of Pharmacy Practice Statement on Patient Medication Profiles.)

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Highly effective oral bronchodilator.

Minimal cardiac effect.

Side effects are generally transient.

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Please see full prescribing information on the back of this page

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An oral bronchodilator for patients with bronchial asthma and reversible bronchospasm associated with bronchitis and emphysema.

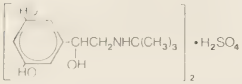
Brethine™

brand of terbutaline sulfate

Tablets of 5 mg.

Prescribing Information

Description Brethine, brand of terbutaline sulfate, a synthetic sympathomimetic amine, may be chemically described as α-[(*tert*-butylamino) methyl]-3,5-dihydroxybenzyl alcohol sulfate. The structural formula is as follows:



Brethine, brand of terbutaline sulfate, is a water soluble, colorless, crystalline solid. Tablets containing Brethine, brand of terbutaline sulfate, should be stored at controlled room temperature.

Each scored, white tablet contains 5 mg. (equivalent to 4.1 mg. of free base) of Brethine, brand of terbutaline sulfate

Actions Brethine, brand of terbutaline sulfate, is a β-adrenergic receptor agonist which has been shown by *in vitro* and *in vivo* pharmacological studies in animals to exert a preferential effect on β_2 adrenergic receptors such as those located in bronchial smooth muscle. Controlled clinical studies in patients who were administered the drug orally have revealed proportionally greater changes in pulmonary function parameters than in heart rate or blood pressure. While this *suggests* a relative preference for the β_2 receptor in man, the usual cardiovascular effects commonly associated with sympathomimetic agents were also observed with Brethine, brand of terbutaline sulfate

Brethine, brand of terbutaline sulfate, has been shown in controlled clinical studies to relieve bronchospasm in chronic obstructive pulmonary disease

This action is manifested by a clinically significant increase in pulmonary function as demonstrated by an increase of 15% or more in FEV_1 and in $FEF_{25\text{-}75\%}$. Following administration of Brethine, brand of terbutaline sulfate, tablets, a measurable change in flow rate is usually observed in 30 minutes, and a clinically significant improvement in pulmonary function occurs at 60-120 minutes. The maximum effect usually occurs within 120-180 minutes. Brethine, brand of terbutaline sulfate, also produces a clinically significant decrease in airway and pulmonary resistance which persists for at least four hours or longer. Significant bronchodilator action, as measured by various pulmonary function determinations (airway resistance, $FEF_{25\text{-}75\%}$, or PEFR), has been demonstrated in some studies for periods up to eight hours.

Clinical studies were conducted in which the effectiveness of Brethine, brand of terbutaline sulfate, was evaluated in comparison with ephedrine over periods up to three months. Both drugs continued to produce significant improvement in pulmonary function throughout this period of treatment.

Indications Brethine, brand of terbutaline sulfate, is indicated as a bronchodilator for bronchial asthma and for reversible bronchospasm which may occur in association with bronchitis and emphysema.

Contraindications Brethine, brand of terbutaline sulfate, is contraindicated when there is known hypersensitivity to sympathomimetic amines.

Warnings *Usage in Pregnancy:* Animal reproductive studies have been negative with respect to adverse effects on fetal development. The safe use of Brethine, brand of terbutaline sulfate, has not, however, been established in human pregnancy. As with any medication, the use of the drug in pregnancy, lactation, or women of childbearing potential requires that the expected therapeutic benefit of the drug be weighed against its possible hazards to the mother or child

Usage in Pediatrics: Brethine, brand of terbutaline sulfate, tablets are not presently recommended for children below the age of 12 years due to insufficient clinical data in this pediatric group.

Precautions Brethine, brand of terbutaline sulfate, should be used with caution in patients with diabetes, hypertension, and hyperthyroidism.

As with other sympathomimetic bronchodilator agents, Brethine, brand of terbutaline sulfate, should be administered cautiously to cardiac patients, especially those with associated arrhythmias.

The concomitant use of Brethine, brand of terbutaline sulfate, with other sympathomimetic agents is not recommended, since their combined effect on the cardiovascular system may be deleterious to the patient. However, this does not preclude the use of an aerosol bronchodilator of the adrenergic stimulant type for the relief of an acute bronchospasm in patients receiving chronic oral Brethine, brand of terbutaline sulfate, therapy.

Adverse Reactions Commonly observed side effects include nervousness and tremor. Other reported reactions include headache, increased heart rate, palpitations, drowsiness, nausea, vomiting, and sweating. These reactions are generally transient in nature and usually do not require treatment. The frequency of these side effects appears to diminish with continued therapy. In general, all the side effects observed are characteristic of those commonly seen with sympathomimetic amines.

Dosage and Administration The usual oral dose of Brethine, brand of terbutaline sulfate, for adults is 5 mg. administered at approximately six-hour intervals, three times daily, during the hours the patient is usually awake. If side effects are particularly disturbing, the dose may be reduced to 2.5 mg., three times daily, and still provide a clinically significant improvement in pulmonary function. A dose of 2.5 mg., three times daily, also is recommended for children in the 12- to 15-year group. Brethine, brand of terbutaline sulfate, is not recommended at present for use in children below the age of 12 years. In adults, a total dose of 15 mg. should not be exceeded in a 24-hour period. In children, a total dose of 7.5 mg. should not be exceeded in a 24-hour period.

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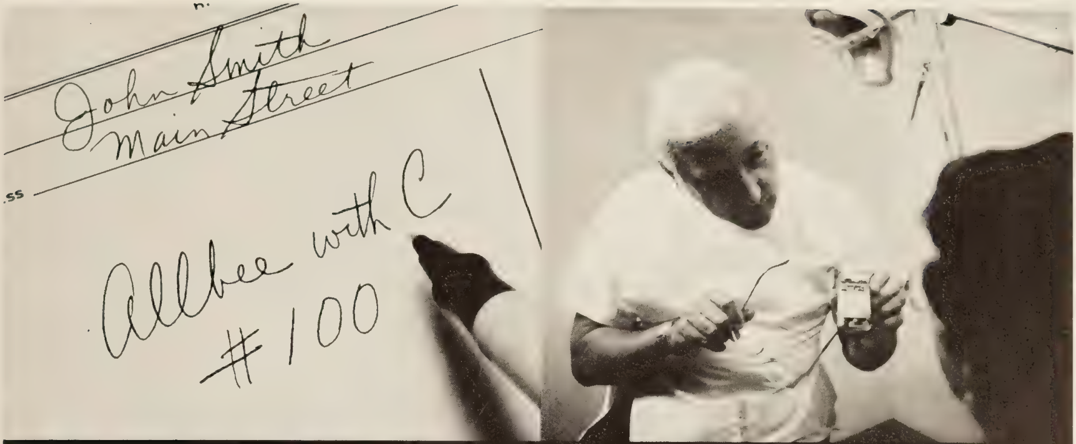
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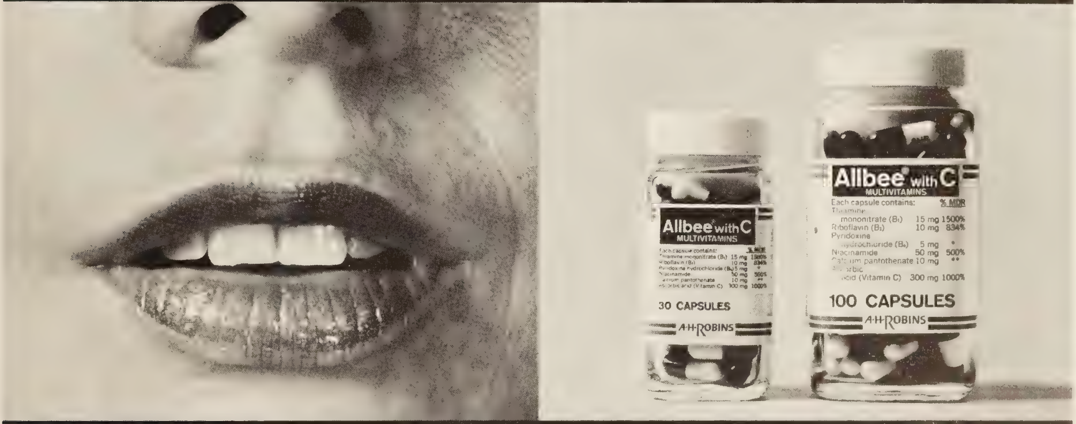
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Ophthalmic Drugs for the Geriatric Patient

BERRY J. MEANS and PETER P. LAMY, Ph.D.,* *Baltimore, Maryland*

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"Clinical Medicine", October 1975

☐ *Older patients often have unique eye problems for which ophthalmic drops are frequently indicated. However, the physician must use caution in prescribing these drugs because of possible adverse effects.* ☐

As one becomes older, certain changes take place in the eye. Streiff refers to two different types of changes.[1][†] The normal physiologic processes which are inevitable in old age are gerontologic changes, while changes due to pathologic processes are geriatric. According to Bell, structural and functional changes in the eye can be divided into two categories:[2] (1) Those involving mechanical aspects of the lens, which begin at age 40 and deal with physical aspects of the diopteric media. These changes cause slow accommodation, less tolerance to glare, and a decrease in the amount of light that enters the eye. (2) Those involving the retina and metabolic system. These changes usually start at around age 60 and are thought to be due to decreased oxygen supply, neuronal death, or both. These latter changes cause loss of the visual field, delayed adaptation to darkness, and other problems.

The tissue of the eyelids and surrounding area undergoes changes with age mainly because of dehydration of the skin and ocular muscles, atrophy of fat tissue, and a loss of skin elasticity and fibrous tissue. The skin of the lids wrinkles, leading to the "baggy" eyes so common in older people. The lower lid may fall away from the eyeball (senile ectropion), leaving it unprotected and allowing tears to accumulate. The eyelashes may turn in toward the cornea (senile entropion), causing irritation.

The corneal endothelium can undergo degenerative changes.[3] Degenerated endothelium can become edematous decreasing the optical efficiency of the cornea. This usually shows up in the morning after sleep and is dispersed as the day passes by the blinking of the eye. As one ages, the cornea increases its curvature, producing astigmatism, and may also be partially circumscribed by fat deposits producing a condition known as arcus senilis.[1,3]

The corneoscleral trabeculae become denser owing to tissue sclerosis and hyalinization, thus reducing the iridocorneal angle and increasing the resistance to the outflow of aqueous humor.[1]

The vitreous body changes with age.[4] Two of the most common symptoms resulting from these changes are "floaters," or floating bodies which the patient sees when looking at a bright field or a light surface, and photopsia or light flashes observed when the eyes are moved while the lids are closed. The "floaters" referred to as muscae volitantes are from fine fibers or cellular aggregates that become more visible as the vitrous gel liquefies. Vitreous detachment may accompany this age-induced liquefaction of the vitreous body. The photopsia are thought to be caused by traction as the contracting vitreous body pulls away from the retina.

The part of the eye displaying the most obvious changes due to age is the lens.[5,6] The lens continues to grow throughout life; new fibers are formed and superimposed on the old, which become smaller, dehydrated, more dense, and less flexible. Eventually the lens becomes so hard and inflexible that it is limited in its ability to accommodate (focus objects clearly on the retina), and corrective lenses are required. The lens becomes less transparent, resulting in a decreased amount of light that reaches the retina.[7] Lessening in lens clarity is referred to as a cataract. Cataracts are the most common disability in the aged eye.[8,9]

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*Mr. Means is a Drug Information Pharmacist at the Johns Hopkins Hospital, Pharmacy Dept. When the paper was written, he was a Graduate Student in the Institutional Pharmacy Programs, University of Maryland. Dr. Lamy is Professor of Pharmacy and Director, Institutional Pharmacy Programs, School of Pharmacy/University of Maryland Hospital, University of Maryland.

†Bibliography supplied on request.

In fact, Beehler states that the nature of the lens is such that everyone would experience cataracts given a long enough life-span.[10] These cataracts can be ascribed to physiologic causes associated with the gradual loss of transparency due to increased numbers of dense fibers, or to pathologic causes. The etiology of pathologic cataracts is not completely understood.[5] There is some evidence, however, implicating certain drugs and specifically certain eye drops in the formation of lens opacities.[11,12]

> *. . . the cataractogenic properties of steroids appear to be age - and dose-related . . .*

Among the systemic drugs implicated in cataracts mentioned by Paterson are the corticosteroids and phenothiazines.[12] The lens opacities associated with steroid therapy start in the posterior subcapsulary region and are referred to as posterior subcapsulary cataracts (PSCC). As the cataracts progress they move toward the outside of the lens and eventually merge to form a conglomerate. Although PSCC are not only caused by steroids, there is a higher incidence in the older patient and especially in patients on long-term corticosteroid therapy. Spaeth and von Sallmann, who compiled reports on 693 patients treated with systemic steroids, found 21 percent with lens changes, compared to an approximate PSCC incidence of 0.2 percent in the general population.[12,13] Several studies have suggested that the cataractogenic properties of steroids are dose-related.[14-16] PSCC did not develop when patients were treated with less than 10 mg. of prednisone per day, but did develop in about 75 percent of those receiving over 16 mg. of prednisone daily.[14-16] Paterson does not say whether different corticosteroids possess different degrees of cataractogenicity.[12] It would be safe to say that the cataractogenic properties of steroids are age- and dose-related.

Chlorpromazine causes lens changes in patients who have received the drug for long periods of time.[17] As little as 300 mg. chlorpromazine daily for several years may cause these changes, and in patients taking a total dose of 250 Gm. there is an incidence of lens changes of about 90 percent.[18,19] Other phenothiazines may also cause lens opacities.[20]

Macular degeneration is the cause of many visual problems in the aged, affecting about 30 percent of the elderly over age 65.[9] Since the macula is that part of the retina responsible for visual acuity, these older persons complain of an inability to read or recognize faces, while peripheral vision is relatively unaffected.[3,5,21] This condition could be caused by diseases such as diabetes.

Glaucoma is the second most important eye problem in the elderly. Different studies report the prevalence of glaucoma in persons over age 40 to be from 0.65 to nine percent.[22-26] Pollack points out that the differences in reported prevalence of glaucoma may be owing to differences in methods of examination and data analysis; population bias; and, most importantly, the lack of a uniform definition of glaucoma.[27] Since the diagnosis of glaucoma was formerly based more on ocular hypertension than on the disc and field changes that have been emphasized more recently, the true prevalence of glaucoma most likely falls at the lower end of the range of reported prevalence. Glaucoma is classified into two basic types—narrow angle and chronic simple or open angle. The two types are similar only in that they cause elevated intraocular pressure.

Normally, intraocular pressure remains constant due to a decrease in aqueous humor production that matches the increased resistance to flow from the anterior chamber.[5] When the resistance increases to the point that the intraocular pressure rises above normal levels, however, the person is said to have open angle glaucoma. The acute closed angle type of glaucoma appears to occur only in persons anatomically predisposed to the condition by the shallow anterior chamber, especially those with hyperopia (far-sightedness). Narrow angle glaucoma may be more prevalent in persons from the fifth decade onward due to the increasing size of the lens, which continues to grow throughout life, decreasing the depth of the anterior chamber.[27] The increased intraocular pressure associated with both types of glaucoma causes a cupping and atrophy of the optic nerve, resulting in progressive, irreversible loss of peripheral vision.

There are reports of various drugs adversely affecting the patient's eye by increasing intraocular pressure. The package insert of many drugs cautions the physician about prescribing them for patients with glaucoma.[27] Among these are the anticholinergic and sympathomimetic drugs. Willetts and Hopkins and Lund state that the danger of using these drugs is most significant in persons with a narrow anterior chamber irrespective of the presence of glaucoma.[28,29] Lund feels that the risk to the patient with a narrow anterior chamber is proportional to the dilating effect of the drug.[29] Lazenby et al. studied the effect of 0.6 mg. of atropine three

TABLE 1

DRUGS LABELED AS CONTRAINDICATED OR TO BE USED WITH CAUTION IN GLAUCOMA*

Generic Name	Comment
Amitriptyline	Contraindicated
Amphetamine	Contraindicated, especially in narrow angle
Amyl nitrite	Use with caution
Anisotropine	Generally contraindicated
Atropine	Generally contraindicated
Belladonna	Generally contraindicated
Benzphetamine	Contraindicated, especially in narrow angle
Benztropine	May cause or aggravate glaucoma
Biperiden	Use with caution
Carbamazepine	Closely observe patient with increased ocular tension
Chlorphenoxamine	Use with caution
Chlorphentermine	Contraindicated, especially in narrow angle
Chlorprothixene	Has anticholinergic properties
Cycrimine	Contraindicated
Cyproheptadine	Weak, peripheral anticholinergic action
Desipramine	Use with caution
Dextroamphetamine	Contraindicated, especially in narrow angle
Diethylpropion	Possibly contraindicated, especially in narrow angle
Dimethindene	Tertiary amine with action similar to tertiary amine anticholinergic
Diphemanil	Generally contraindicated
Diphenidol	Use with caution
Doxepin	Contraindicated
Erythrityle tetranitrate	Use with caution
Ethopropazine	Use with caution
Flavoxate	Increases ocular tension
Fluphenazine	May cause glaucoma
Glycopyrrolate	Use with caution
Hexocyclium	Generally contraindicated
Homatropine	Generally contraindicated
Imipramine	Use with caution
Isocarboxazid	May aggravate

(Continued on next page)

times a day for seven days on patients with chronic open angle glaucoma.[30] The authors concluded that while one should be cautious in the repeated systemic administration of anticholinergics to patients with open angle glaucoma, significant increases in intraocular pressure are likely to occur in only a small minority of patients. Some of the psychotropic drugs (e.g., the tricyclic antidepressants and phenothiazines) are thought to have anticholinergic properties. Lund, however, found psychotropic-induced glaucoma extremely rare.[29] The topical vasoconstrictors (e.g., phenylephrine and tetrahydrozoline) are to be used with caution in patients with narrow angle glaucoma. Drugs commonly used to treat parkinsonism, a condition common in older persons, have anticholinergic properties and also bear the recommendation that they must be used with caution in patients with glaucoma. Table 1 lists drugs that are labeled as being contraindicated or to be used with caution in glaucoma. This is not meant to be an all-inclusive list. In the patient with open angle glaucoma, however, the danger of these drugs increasing intraocular pressure is doubtful.

Keratitis sicca (dry eye), a problem of the older patient, appears to be more common than formerly suspected.[31,32] The patient frequently complains of a burning sensation or sandy feeling in the eyes. The extent of tear production can be estimated by the Schirmer test.

While persons of all ages are susceptible to inflammation of the eyes, certain conditions may be more familiar in the geriatric patient. The corners of the eye (canthi) in the older patient are particularly prone to infection.

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* Compiled from the American Hospital Formulary Service, American Society of Hospital Pharmacists.

TABLE 1 (continued)

Generic Name	Comment
Isopropamide	Contraindicated
Isosorbide dinitrate	Use with caution
Levodopa	Contraindicated in narrow angle; supervise use in wide angle
Mepenzolate	Generally contraindicated
Methamphetamine	Contraindicated, especially in narrow angle
Methantheline	Contraindicated
Methixene	Use with caution
Methscopolamine	Contraindicated
Methylatropine	Generally contraindicated
Methylphenidate	Contraindicated
Nialamide	May aggravate
Nitroglycerine	Use with caution
Nortriptyline	Use with caution
Orphenadrine	Contraindicated
Oxyphencyclimine	Contraindicated
Oxyphenonium	Contraindicated
Papverine	Use with caution
Pentapiperide	Contraindicated
Pentaerythritol tetranitrate	Use with caution
Penthienate	Generally contraindicated
Phendimetrazine	Contraindicated, especially in narrow angle
Phenelzine	May aggravate
Phenmetrazine	Possibly contraindicated
Phentermine	Possibly contraindicated
Pipenzolate	Generally contraindicated
Piperidolate	Use with caution
Poldine	Generally contraindicated
Procyclidine	Use with caution
Propantheline	Contraindicated
Protriptyline	Contraindicated
Tricyclamol	Generally contraindicated
Tridihexethyl	Contraindicated
Trihexyphenidyl	Use with caution
Triprolidine	Tertiary amine with action similar to tertiary amine anticholinergic
Trolnitrate	Use with caution.

Wrinkled and loose skin has a tendency to retain tears, which then provide an ideal site for an infection to start.[6]

Another area of concern is exemplified by a report of an epidemic of keratoconjunctivitis epidemica in a home for the aged.[33] One patient with the disease was tested for increased intraocular pressure and the contaminated instrument was subsequently used on other patients.

Treatment of Eye Problems in the Aged

The treatment of pathologic and physiologic ocular conditions in the elderly is relatively specific. Cataracts are a surgical problem, the indication for surgery being based to a large extent on the degree of vision impairment and needs of the patient. The use of new suturing techniques, cryoextractors, and alpha-chymotrypsin help to make this operation almost always safe and successful.[10]

Macular degeneration, which causes the older patient to lose central visual acuity, cannot really be treated. The patient is assured that he will not "go blind" and encouraged to partake in activities that rely more on peripheral vision.

Glaucoma is one of the eye problems of older persons that generally responds to drug therapy. The acute attack of narrow angle glaucoma is treated with miotics and, if necessary, systemic drugs (e.g., mannitol or urea) administered intravenously or glycerine, 50 to 70 percent, administered orally. These drugs lower intraocular pressure by making the blood hyperosmolar in comparison to the aqueous humor of the eye. The condition is generally cured by surgery. The chronic open angle type of glaucoma may be more dangerous than the acute type due to its insidious nature.[10,28] Chronic open angle glaucoma can usually be controlled by the use of opthalmic drops and the tendency is to delay surgery as long as possible.[34]

Cholinergics such as pilocarpine and carbachol have been used to treat glaucoma. Pilocarpine is first tried in a weak strength (0.5 percent) up to every six hours. The strength may be increased until an adequate response is obtained. Carbachol may be used as a substitute for pilocarpine in patients showing an allergy to the latter. These cholinergic drugs facilitate the filtering of the aqueous humor out of the anterior chamber through the trabecular network. The specific manner in which these agents do this is not understood.

> *. . . glaucoma is one eye problem that usually responds to drug therapy . . .*

Epinephrine had fallen into disrepute owing to the fact that it dilates the pupil and had precipitated attacks of acute narrow angle glaucoma.[21] Since it is now possible to differentiate between narrow and wide angle glaucoma, epinephrine has once again become accepted as a valuable drug in the treatment of glaucoma. It is thought to have a dual mechanism of action: It decreases production of aqueous humor and also increases the rate of filtration of fluid out of the anterior chamber.[30] It is not uncommon to see pilocarpine and epinephrine used concurrently in the treatment of glaucoma.

The organophosphate cholinesterase inhibitors are also useful in the treatment of open angle glaucoma. They frequently maintain normal intraocular pressure when the more commonly used miotics have not been successful. Echothiophate iodide is probably one of the most well known preparations of this type.

Recently there has been concern about reports that the cholinesterase inhibitors cause lens opacities.[11,12] Pietsch et al. demonstrated lens changes in 37 glaucoma patients after only four months of echothiophate therapy.[11] Shaffer and Heatherington found that there was approximately the same percentage of lens opacities with isoflurophate, demercarium bromide, and echothiophate.[33] The echothiophate package insert points out that the cataractogenic properties of the drug apparently are dose- and age-related, and selective in that some patients have not experienced lens opacities after many years of therapy with the higher concentrations of the drug. Harris studied the dose response of various concentrations of echothiophate from 0.03 to 0.25 percent.[36] He found that as the concentration exceeded 0.06 percent, a large number of subjects complained of side effects (browache, dimness of vision, and blurring) and no improvement in pressure or outflow was achieved. He states that since there is evidence to indicate the cataractogenic properties of echothiophate are dose-dependent, there is little rationale for using echothiophate in concentrations above 0.06 percent.[36] On the other hand, oral anticholinesterases do not appear to be particularly cataractogenic.[37]

Dry eye is a problem prevalent in the older patient which may be treated with ophthalmic drops.[32] Lemp et al. describe the tear film as a three-part structure—a thin, superficial lipid layer; a thicker aqueous layer; and an innermost mucoid layer.[38] The cornea itself is described as a hydrophobic structure. The conjunctival mucus produced in the conjunctival goblet cells and mechanically spread on the cornea by blinking provides a hydrophilic surface on which the tears spread. If this mucous layer is not present the tear film breaks up prematurely. Dry eye is thought to be due to two possible causes—a decrease in amount of tear production or a decrease in the amount of mucus adsorbed on the cornea. Many products have been promoted for the treatment of dry eye. Among these are agents to increase tear viscosity (e.g., methylcellulose) and agents to produce a filmlike corneal covering (e.g., polyvinyl alcohol).[39] Methylcellulose is available in concentrations ranging from 0.5 to 5 percent, and polyvinyl alcohol is used as a 1.4 percent solution.

A disadvantage of methylcellulose is that as the solvent evaporates, a flaky residue is left to combine with any mucus that is present to cause a decrease in vision and comfort, and patients may, therefore, prefer polyvinyl alcohol.[40] Barsam and colleagues state that the chief disadvantage of methylcellulose and polyvinyl alcohol is the short duration of action.[41] Based on Lemp's mucoid theory of tear film, they used an ophthalmic solution prepared with a water-soluble polymer having mucoid properties in 112 patients and concluded that this mucoid-like polymer did prevent tear film breakup longer than other agents.

Anti-infectives and/or anti-inflammatory drugs are available as combinations in numerous products and their use may possibly cause problems in the older patient. There are reports of topical steroids increasing

(continued on page 25)

maryland board of pharmacy

The following are the pharmacy changes for the month of February:

New Pharmacies

Dart Drug Corporation #234, Herbert Haft, President; 5100 Nicholson Lane, Rockville, Maryland 20852.

West Baltimore Community Health Care Corporation, Thomas E. Waters, Project Director; 1701 West Pratt Street, Baltimore, Maryland 21223.

Institutional Pharmacy Services, Inc., Gilbert Cohen, President; 902 North Charles Street, Baltimore, Maryland 21201.

Dorchester General Hospital, Inc., Alfred R. Maryanov, President; 300 Byrn Street, Cambridge, Maryland 21613.

Changes of Ownership, Address, Etc.

Bethesda Park Pharmacy, Eddie Wolfe (Change of ownership—was: David C. Healy, President); 11125 Rockville Pike, Rockville, Maryland 20852.

Ingleside Pharmacy, Robert Rosenberg, President (Change of ownership—was: Roger P. Potyk, President); 315 Ingleside Avenue, Baltimore, Maryland 21228.

No Longer Operating As Pharmacies

Peoples Service Drug Store #171, W. J. Johnson, President; 2011 Viers Mill Road, Rockville, Maryland 20851.

The following are the pharmacy changes for the month of March:

New Pharmacies

K Mart Pharmacy #3229, E. E. Wardlow, President; 5100 Sinclair Lane, Baltimore, Maryland 21206.

Changes of Ownership, Address, Etc.

McAlpine Pharmacy, Daniel S. Shaner (Change of ownership—was: Charles F. Young, President); 9141 Baltimore National Pike, Ellicott City, Maryland 21043.

MSJ, Inc., Philip Shermak (Change of ownership—was: Solomon Winn, President) (Change of pharmacy name—was: Winn's Pharmacy); 2540 East Fayette Street, Baltimore, Maryland 21224.

Exams scheduled for June 16-18

The Maryland Board of Pharmacy will conduct its 1976 annual examinations for state registration as a pharmacist on Wednesday, Thursday, and Friday, June 16 through 18 at the University of Maryland, School of Pharmacy, 636 West Lombard Street, Baltimore, Maryland.

The examinations are scheduled to begin at 8:00 a.m. each day.

All applications for the examination must be in the hands of the Maryland Board of Pharmacy by Friday, June 4, 1976. The Maryland Board of Pharmacy is located at 210 West Preston Street, Baltimore, Maryland (Telephone: 383-2729).

U. of Md. School of Pharmacy "PEP" Seminar/Workshop

The University of Maryland School of Pharmacy sponsored a workshop for community and hospital Professional Experience Program (PEP) preceptors, faculty members and guests to demonstrate how to screen hypertension patients. Approximately 50 people attended the workshop from the Baltimore, Western Maryland, Eastern Shore, and Virginia areas.

The Professional Experience Program is designed to give fifth-year Pharmacy students the opportunity to work "in the field" under the sponsorship of over 100 hospital and community pharmacists.

Dr. Robert A. Kerr, David S. Roffman, and Robert J. Michocki all of the University of Maryland's Division of Clinical Pharmacy, taught workshop participants how to take a correct blood pressure and pulse.

Wendy Klein, Raymond Love, and Christine Bell, Pharm. D. students; Donald Fedder of the school's Pharmacy Department; and Henry R. Seidman, Director of Continuing Education, also provided services at the workshop.

The Baltimore Chapter of the American Heart Association provided the necessary equipment and the firm of Merck, Sharpe and Dohme supplied the material needed to conduct the tests.

Workshop participants were divided into small groups and given pre-and post-tests based upon the correct systolic and diastolic pressures taken. The average pre-test score was 36 (out of a possible 100) and the success of the workshop can be demonstrated by the final post-test scores which ran into the mid50's. Of the 58% who said they knew how to take blood pressures and check pulse rates, 94% said they had learned new information at the workshop.

Continuing Education credits will be awarded those who attended the seminar and workshop upon the successful completion of a second June test.

BRIGGS HONORED BY ALUMNI ASSOCIATION

The Alumni Association of the University of Maryland School of Pharmacy hosted a Dinner Meeting at Martin's Caterers West on Sunday, March 21, 1976.

Henry G. Seidman, Vice President of the Alumni Associaion, served as Chairman of the Dinner Program. After the association members were greeted by Leon Weiner, President of the Alumni Associaton, remarks were delivered by Dr. William J. Kinnard, Jr., Dean of the University of Maryland, School of Pharmacy; Dr. Albin O. Kuhn, Chancellor of the University of Maryland at Baltimore; and Colonel J. Logan Schutz, Director of the Alumni Affairs for the University of Maryland.

Following a cocktail hour and gourmet dinner, Dr. W. Paul Briggs was awarded the Honorary President's Plaque of the University of Maryland School of Pharmacy Alumni Association in recognition of his services and contributions to the profession of pharmacy.

A registered pharmacist since 1934, Dr. Briggs is a nationally known pharmacist, educator, writer, and administrator. A former Executive Director of the American Foundation for Pharmaceutical Education, Dr. Briggs served on the faculty of George Washington University for 25 years, fourteen of which were as the Dean of the School of Pharmacy.

A veteran of six years service, Commander Briggs served in the United States Navy during World War II from 1942 to 1945 and again, on special assignment from 1948 to 1951.

Dr. W. Paul Briggs (right) receives the Honorary President's Plaque from Leon Weiner (left), President of the Alumni Association.

Photos By Paramount Photo Service

A member of the Committee on Pharmaceutical Survey, Dr. Briggs participated in a three year study of the pharmaceutical profession and its educational systems at the request of the American Council of Education.

A former Secretary of the National Drug Trade Conference, Dr. Briggs also served on the Board of Trustees of the United States Pharmacopeia. In 1957 he was awarded Pharmacy's highest honor, the Remington Medal.

A member of Rho Chi and an honorary member of Alpha Zeta Omega and Kappa Psi, Dr. Briggs completed his undergraduate work at George Washington University and received his Master's Degree from the University of Maryland. In addition, Dr. Briggs has been awarded Honorary Degrees from the Philadelphia College of Pharmacy and Science, Temple University, Ohio Northern University, and Northeastern University.

Dr. Briggs also received the Alumni Achievement Award from George Washington University for distinguished services to the university, the government, and his profession.

Following the award presentation Mr. Irving Rubin, editor of PHARMACY TIMES gave an informative talk on "Ten Predictions for Pharmacy in 1980".

At the conclusion of his lecture Mr. Rubin was presented with a plaque in recognition of his contributions to the advancement of pharmacy by the Chairman Henry G. Seidman, President of the Alumni Association who is also the current President of MPhA.

A 1936 graduate of the Brooklyn College of Pharmacy, Mr. Rubin has over 25 years experience in editing pharmaceutical publications. A nationally recognized writer and lecturer on pharmaceutical subjects, Mr. Rubin was awarded the first Annual Achievement Award from the Brooklyn College of Pharmacy. In 1964 he received numerous honors and awards for editorial achievement and public service from the Alpha Zeta Omega Pharmaceutical Fraternity and the American Cancer Society.

Among Mr. Rubin's editorial projects have been the Pharmacists' Oath, which is administered to all pharmacists nationwide upon graduation, a United States Postage Stamp issued in 1972 by the Post Office Department in honor of the pharmacists' contributions to American society, and a book entitled "The Pharmacy Graduate's Career Guide".

Irving Rubin (right), Editor of PHARMACY TIMES, is presented with a plaque in recognition of his contributions to the advancement of pharmacy by Henry G. Seidman, Vice President of the Alumni Association and Dinner Meeting Chairman.

Photos By Paramount Photo Service

The Invocation was delivered by Sanford L. Rosenbloom and George Voxakis, Executive Secretary of the Alumni Association, delivered the Benediction at the conclusion of the evening's program.

Serving on the Dinner Meeting Committee of the Alumni Association were Henry G. Seidman (Committee Chairman), Milton A. Friedman, Dorthy Levi, Bernard Macek, Larry Rosenbloom, Charles A. Sandler, Ronald Sanford, Charles Tregoe, George Voxakis, H. Nelson Warfield, William Weiner, and Leon Weiner.

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INSTITUTIONAL PHARMACY *(continued from page 22)*

intraocular pressure.[12,32,42] As with systemic corticosteroids, there is also reason to believe that topical corticosteroids can be cataractogenic.[12]

Use of Ophthalmic Solutions in a Geriatric Hospital

In an attempt to gather some information on the actual use of eye drops in the geriatric population, a survey was conducted of the current orders for ophthalmic drops for the patients in a geriatric hospital in the Baltimore, Maryland, vicinity. The hospital has approximately 265 beds.

The survey showed 67 patients (27 percent) using ophthalmic solutions. The average age of 49 of these patients (age not available for others) was 83 years. There were 83 ophthalmic orders in effect for these 67 patients, representing 24 different products. Many of these were combination products. Thus, frequently, a patient received more than one drug (for example, anti-infective plus steroid).

Over one fourth (27 percent) of these patients were using some kind of eye drop. The miotics are most frequently used, i.e., 36 percent of the patients using ophthalmic drops received miotics. This represents almost 10 percent of the hospital population, comparing favorably with the highest estimates in the literature of the prevalence of glaucoma in the general population over age 40. The prevalence of glaucoma in the hospital population, however, would be expected to be higher than that in the general population, because the hospital population would be considerably older than the general population and the hospitalized patients would receive regular eye examinations, thus decreasing the chance of glaucoma going undetected.

The antihistamine-decongestants were also frequently used, most often for tired, red eyes. Most of these solutions contain phenylephrine or other vasoconstrictors. It is recommended that these drugs be used with caution in patients with narrow-angle glaucoma. In the geriatric population it is quite likely that there will be persons disposed to narrow-angle glaucoma, but not diagnosed as such. It would make sense, especially in the older populations, to use ocular lubricants rather than vasoconstrictors whenever possible to avoid the possibility of precipitating an attack of narrow-angle glaucoma.

A frequently prescribed individual product was a decongestant containing boric acid. Boric acid can cause rather serious toxic effects when absorbed systemically and has, for the most part, fallen into disuse. However, it is still used in ophthalmic solutions as a preservative and/or buffering agent, and one may well question its possible toxic effect due to long-term chronic use in

INSTITUTIONAL PHARMACY *(continued on page 30)*

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PAUL REZNEK CITED BY MARYLAND STATE SENATE

Paul Reznek, Executive Secretary of the Prince George/Montgomery County Pharmaceutical Association and long active in the affairs of professional pharmaceutical associations, was honored by the Maryland State Senate with a Resolution of congratulation for his contributions to pharmacy. Resolution introduced by State Senators Victor L. Crawford and Arthur Dorman. The Resolution reads as follows:

SENATE RESOLUTION
No. 127

A Senate Resolution concerning

Paul Reznek

FOR the purpose of congratulating Paul Reznek on his many accomplishments during a long career in pharmacy.

Paul Reznek has completed fifty years of distinguished service to the Pharmaceutical profession.

He is a member of the Maryland Pharmaceutical Association, the Prince George's - Montgomery County Pharmaceutical Association, the National Association of Retail Druggists, the American Pharmaceutical Association, the Alpha Zeta Omega Pharmaceutical Fraternity, the District of Columbia Pharmaceutical Association, the Metropolitan Pharmaceutical Secretaries' Association, and the Metropolitan Guild of Pharmacists.

He is presently Executive Secretary of the Prince George's - Montgomery County Pharmaceutical Association, Editor of the "Bi-County Pharmacist", Editor of the Golden Anniversary Issue of "The Azoan", and the National Legislative Representative for the Alpha Zeta Omega Pharmaceutical Fraternity.

He has received the Honorable Mention Lederle Award for Interprofessional Services for 1971, the Past President's Award of the Prince George's - Montgomery County Pharmaceutical Association for 1966, the Alpha Zeta Omega Pharmaceutical Fraternity Double Star Award for Meritorious Service to Pharmacy, the Alpha Zeta Omega Meritorious Award for 1974, and the Bowl of Hygeia for Maryland for 1974.

He has been a staff member of the Maryland Pharmaceutical Association, Assistant Editor of the "Maryland Pharmacist", a member of the Pharmaceutical Association Committee on Public Relations, a past Associate Editor of the "National Capital Pharmacist," and President of the District of Columbia Pharmaceutical Association.

He received his formal pharmaceutical training at Temple University, graduating in 1929.

He has recently been nominated to be Honorary President of the Maryland Pharmaceutical Association; now, therefore be it

RESOLVED BY THE SENATE OF MARYLAND, That this Body notes the impressive accomplishments of Paul Reznek in the demanding profession of Pharmacy; and be it further

RESOLVED, That this Body extends its congratulations to Paul Reznek in recognition of his completion of fifty years as an outstanding Pharmacist; and be it further

RESOLVED, That a copy of this Resolution be sent to Paul Reznek, 11700 Old Columbia Pike, Silver Spring, Maryland 20904.

ELSBERG HONORED BY ADL

MPhA member Milton L. Elsberg, President of Drug Fair Stores, Inc., was the guest of honor recently at a dinner in the New York Hilton Hotel sponsored by the Drug, Toiletry and Cosmetic Industries Division of the Anti-Defamation League of B'nai B'rith.

Mr. Elsberg was presented with the Torch of Liberty Award by Louis L. Avner of the Thrift Drug Company and Frank H. Barker of Johnson and Johnson, co-sponsors of the event.

N.A.R.D. TO HOLD EXAMINATIONS FOR CERTIFICATION

The National Association of Retail Druggists has announced that the first written and practical examinations for their Voluntary Supports and Appliances Program will be administered prior to and in conjunction with their Annual Meeting to be held in San Francisco in September of 1976.

A pharmacy applying for certification in NARD's Voluntary Supports and Appliances Program must submit evidence of being able to offer the services of qualified fitting personnel, maintain an adequate inventory of surgical appliances, provide a private well-equipped fitting room and other services. A pharmacist applying for certification must present, during the "grandfather clause" period, adequate proof of training and fitting experience in order to qualify. He must be associated with a pharmacy or pharmacist-owned outlet. The same criteria applies to associate fitters.

Readers' Input . . .

The following is a copy of a letter sent to Dr. Neil Solomon, Secretary of Health and Mental Hygiene, in reference to legislation proposed by the Maryland Board of Pharmacy.

Dear Dr. Solomon,

I am a pharmacy owner who practices pharmacy as an individual, by reducing evening hours, shortening Saturday hours, and closing Sunday. With the spiraling costs of wages the financial success of an independent pharmacy may require individual ownership, solely operated, in a small professional area, specializing in prescription service, with a much-shortened work schedule. The aforementioned is anthithesis of the large corporate chain requiring long business hours, a large physical area, and in practical terms a general merchandise store with a pharmacy department. Presently the general stores with a pharmacy department have attempted to reduce their expenses by closing the pharmacy department at specific hours. This legitimate business action has caused a violent reaction from organized pharmacy claiming public danger from employee-pharmacists claiming a loss of job security and wages. On this foundation of utter chaos comes the regulations of the Maryland State Board of Pharmacy which describes the manner by which the pharmacy department may be closed when the pharmacist is not on duty. If the practice of pharmacy as a profession in the future rests in the grocery store or general merchandise store, then the regulations as proposed by the State Board of Pharmacy are in the best interests of pharmacy.

If the practice of pharmacy is to be what it was and can be again, that is, an individual pharmacist owning and practicing his profession in a small professional surrounding then the proposed regulation is totally destructive to the professional progress of pharmacy. It is imperative that a distinction be made between pharmacies that are located in general merchandise stores and pharmacies that are by physical design and percentage of gross income solely pharmacies. The distinction is necessary so that we may foster the propagation of, in terms of the naturalists, an endangered species.

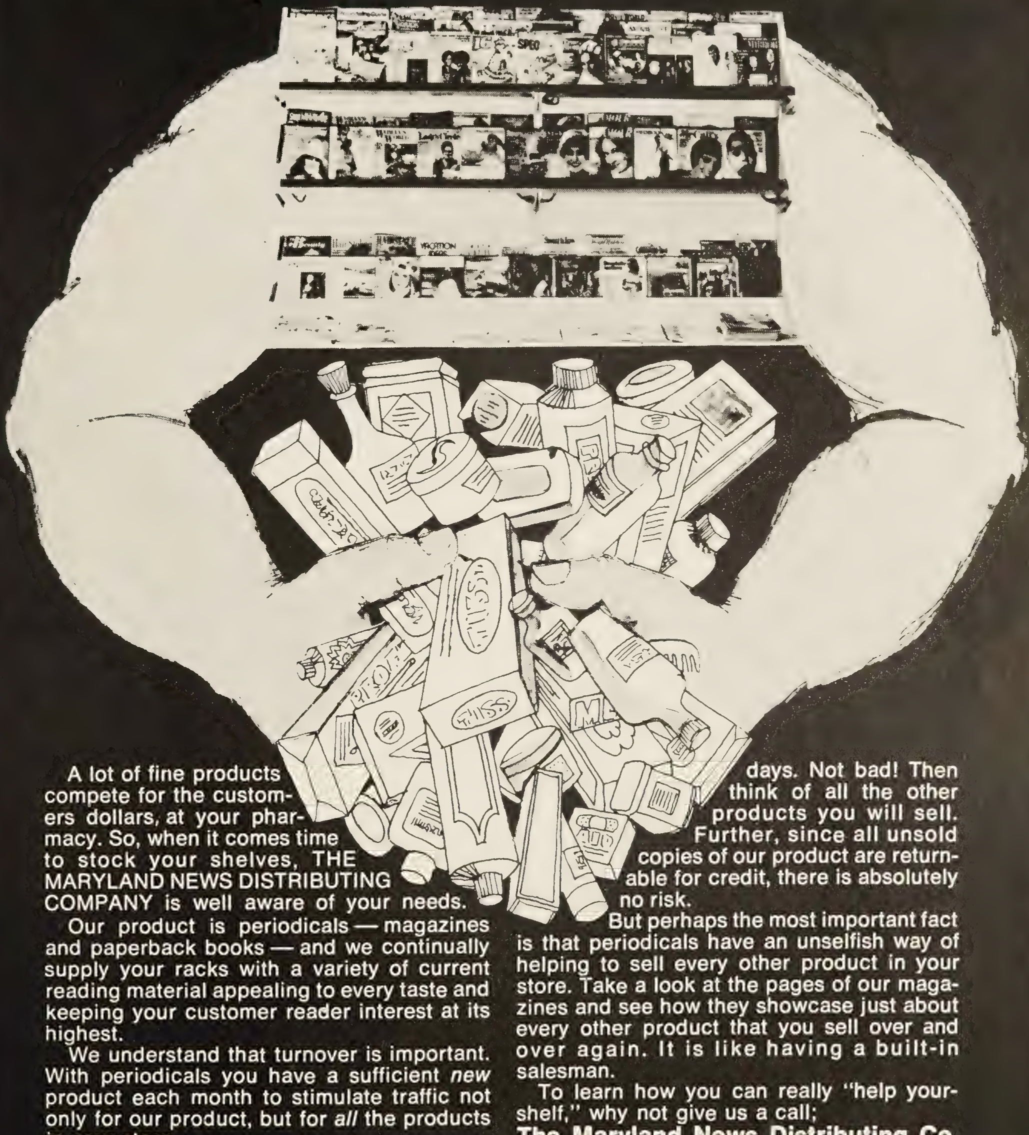
How many private practitioners, who are licensed in other professions can't get a haircut, go out for a hot lunch, or have a business appointment without closing their offices? The answer is: None! The administrative and non-professional duties of the pharmacist can and should be taken care of by responsible delegated aides. A pharmacist should not be required to be on duty for non-professional to answer phones and accomplish the duties that secretaries are quite capable of doing. Delegation of duties to non-professionals is necessary if the practice of professional pharmacy is to survive and flourish. The health and welfare of the citizens of Maryland depends upon a licensed pharmacist using his expertise and knowledge in the act of dispensing a prescribed medication. As long as the dispensing act is not consumated to the public then the prior administrative acts of the pharmacist's assistant should be the responsibility of the pharmacist not the State. The judgement and legal responsibility for dispensing the prescription is the pharmacist's. The simple fact is that there are many procedures prior to dispensing a prescription which do not require a pharmacist to accomplish, therefore it is arbitrary and capricious to have the state demand that those actions have a pharmacist present when they are performed, i.e., answering the phone, renewal requests, retrieving prescriptions from files, receiving prescriptions from patients, counting and pouring medications, typing or labeling containers. The only concern of the state should be the following: Has a licensed pharmacist determined that the medication dispensed is properly prescribed, filled, labeled and therefore safe for the intended treatment of the patient. Any other determination by the state violates the individual freedoms and rights of the pharmacist and will as we have seen by the myriad of rules and regulations suffocate the individual practice of professional pharmacy.

Pharmacists have traditionlly been fearful that the free enterprise system would destroy us if we didn't do something drastic to protect ourselves from it. The fears that stimulated the State Board of Pharmacy to write the rules of "How to close the pharmacy and wish you hadn't" are based upon the fact that a pharmacy could be open at various times during the day and have technicians present during the times when the pharmacist was not on duty. No one has ever asked the public if they would support a "I'm sorry you just missed the pharmacist pharmacy". Let the people not the state decide in the market place the ultimate success or failure of this pharmacy practice. The adoption of the proposed state regulation is totally destructive and will only be another set of unnecessary, repressive, and ridiculous Rube Goldberg rules that have become the trademark of our profession.

Sincerely,

M. Neal Jacobs,
Registered Pharmacist

Laurel, Maryland



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MPhA Member

Maxwell A. Krucoff

Maxwell A Krucoff, 67, Member of the MPhA and BMPA, died on April 19, 1976 at Union Memorial Hospital after a short illness. A native of Baltimore, Mr. Krucoff graduated from City College in 1925 and from the University of Maryland School of Pharmacy in 1928. Mr. Krucoff had owned and operated Maxwell's Pharmacy at Laurens Street and Fremont Avenue since 1944.

A former member of the board of the Bonnie View Country Club, he had belonged to the Great Books Society, a discussion group, and joined the Maryland Academy of Science because of his interest in astronomy.

He is survived by his wife, the former Gladys Bichell; two sons, Karl H. Krucoff, of Boulder, Colorado, and Walter A. Krucoff, of Crofton, Maryland; three sisters, Mrs. Anna Rosenthal and Mrs. Mildred Goldberg, both of Baltimore, and Tille Krucoff, of Setauket, N.Y.

Other Obituaries

Raymond C. Robinson

Dr. Raymond C. Robinson, a 1936 graduate of the University of Maryland School of Pharmacy and a 1940 graduate of the University of Maryland School of Medicine, died on March 18, 1976.

Aaron S. Abramsom

Aaron S. Abramson, 52, pharmacist and owner of Kay Cee Drugs in District Heights, Maryland, died on April 19, 1976, at Prince George's General Hospital.

METCALF APPOINTED GILPIN V.P. SALES

Mr. James E. Allen, Jr., Executive Vice President of the Henry B. Gilpin Company, recently announced the appointment of Harry N. Metcalf as Vice President-Sales of the Gilpin Wholesale Drug Company.

Mr. Metcalf held various sales and division management positions with Foremost McKesson in all areas of the United States and joined Gilpin from his most recent position as Regional Vice President, Service Sales, Eastern Region.

With Gilpin, Mr. Metcalf will be responsible for wholesale drug sales as well as sales of the DATAREX, Micro-Info, Tip-Top and CARE programs. The Henry B. Gilpin Company operates six wholesale drug distribution centers, serving thirteen states in the East, South, and Midwest.

calendar

June 18-20 (Friday, Saturday and Sunday) — Maryland Society of Hospital Pharmacists Annual Seminar, Sheraton Fontainebleau Hotel, Ocean City, Maryland.

June 20-23 (Sunday, Monday, Tuesday and Wednesday) — Maryland Pharmaceutical Association's 94th Annual Convention, Sheraton Fontainebleau Hotel, Ocean City, Maryland.

June 21 (Monday) — TAMPA and LAMPA Annual Meetings, Sheraton Fontainebleau Hotel, Ocean City, Maryland.

INSTITUTIONAL PHARMACY *(continued from page 25)*

ophthalmic drops. In comparing the toxic dose of boric acid in adults (8 to 30 Gm.) and the amount commonly used in ophthalmic drops (0.002 to 1.2 percent) the time required to build up a toxic dose can be calculated. Using a preparation containing 0.7 percent boric acid, for example, at a dose of two drops four times a day (assuming 10 drops per ml., and assuming 100 percent absorption), the dose should be easily tolerated in a person with adequate renal function. In the person with no renal function, it would take over four years to reach a total body store of 8 Gm. It would appear that boric acid containing eye drops can generally be considered safe when used chronically for long periods of time.[43]

Considering that the literature dealing with eye problems in the elderly did not indicate a higher incidence of inflammation and infection in older individuals, there were large numbers of orders for anti-infectives and steroid-containing products. One might wonder if this high usage (17 percent of all drops in 24 percent of the patients) is justified, especially in light of the previously mentioned reports of increased intraocular pressure and increased rate of cataract formation associated with the use of steroid products.

Summary

The aging process leaves the older patient with unique eye problems for which ophthalmic drops are frequently indicated. The use of these drops, however, is not completely without possible adverse effects. It is only by being aware of the physiologic and anatomic changes in the aging eye and the possible harmful effects of the various drugs used for treatment of ocular conditions, that the visual well-being, so important to the older patient, can be guaranteed.□

CONVENTION BULLETIN

94TH ANNUAL CONVENTION

MARYLAND PHARMACEUTICAL ASSOCIATION

in conjunction with

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* * * * * * * *

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All programs, listed social and food functions, bioavailability workshop and materials and prizes: $45.00, Ladies: $40.00. Other attendees not attending C.E. Programs: $35.00. Pharmacy Students: $20.

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Name ______________________________ Name ______________________________
Address ____________________________ Address ____________________________

(Use reverse side for additional names.) PLEASE INCLUDE FIRST NAME OF LADIES.

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____ Ladies @ $40.00
____ Sunday cocktail party @ $10.00
____ Monday LAMPA Brunch @ $7.00
____ Monday Crabfeast and Dance @ $10.00
____ Children Crabfeast @ $3.50; ____ Children Banquet @ $8.50
____ Non-pharmacist Registration without C.E. @$35.00
____ Tuesday Reception, Banquet and Dance @ $20.00
____ Wednesday C.E. @ $10.00

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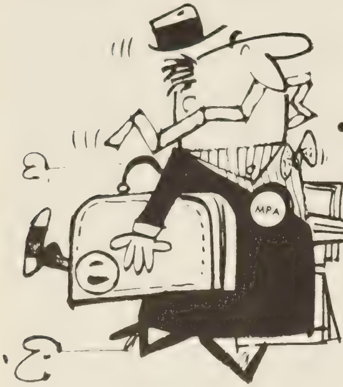

CONVENTION TIME

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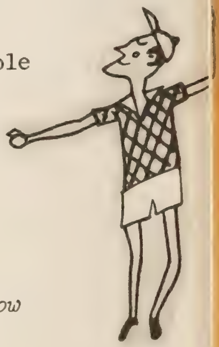
SHERATON FONTAINEBLEAU, OCEAN CITY, MARYLAND

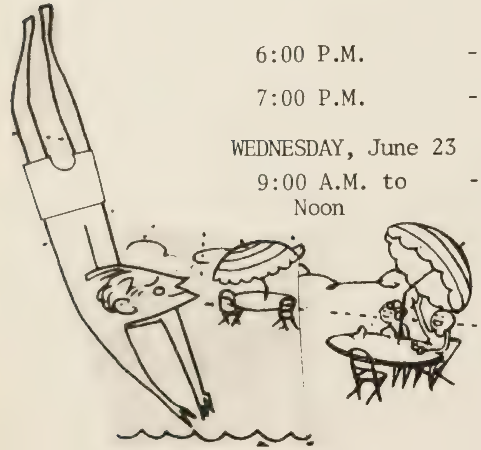
JUNE 20-23, 1976

Follows MSHP Annual Seminar June 18-20. Same Place

PROGRAM HIGHLIGHTS



SUNDAY, June 20	Registration opens Tennis Tournament begins - Golf available Children's supervised programs daily
9:30 P.M.	*Welcome cocktail party and reception*
MONDAY, June 21	
9:00 A.M. to 1:00 P.M.	Opening General Session House of Delegates - First Session Officers' Reports Report of Board of Pharmacy
10:00 A.M.	*LAMPA - Brunch, Meeting and Fashion Show* TAMPA - Annual Meeting
12:30 P.M.	Bicentennial Feature for All *"The Apothecary and the Practice of Medicine in Colonial Times"* - Lecture and slide presentation by *Morris L. Cooper*, Curator MPhA Cole Pharmacy Museum
1:00 P.M.	Golf, Tennis and Beach
6:30 P.M.	*Crabfeast and other goodies. Berlin Fire Hall* *TAMPA Program: Square Dance*
TUESDAY, June 22	
9:00 A.M.	House of Delegates - Second Session Elections of Nominees to State Board of Pharmacy Nomination of Officers and Trustees for Mail Ballot Final Session
6:00 P.M.	*Cocktail Party*
7:00 P.M.	*Annual Banquet and Dance*
WEDNESDAY, June 23	
9:00 A.M. to Noon	Continuing Education Sessions - Certificate of Attendance and C. E. Credits - Co-sponsored by APhA Academy of Pharmacy Practice. *"Understanding and Using Bioavailability Information: An Action Seminar"* Workshops conducted by *Richard P. Penna* and *Ronald Williams.*



THE MARYLAND PHARMACIST

Official Journal of
The Maryland
Pharmaceutical
Association

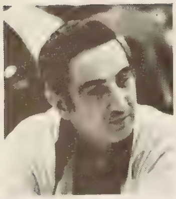
MAY 1976
VOL 52
NO 5

“Professional Standards of Practice: Mandatory or Voluntary?”

Contamination Incidence In An IV Admixture Program

RAY HECKMAN

DENNIS CRAWFORD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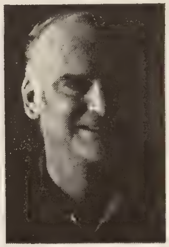
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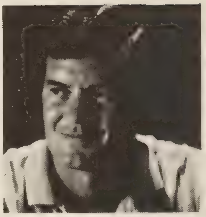
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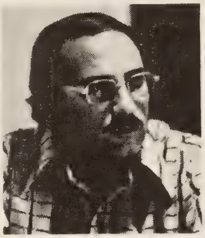
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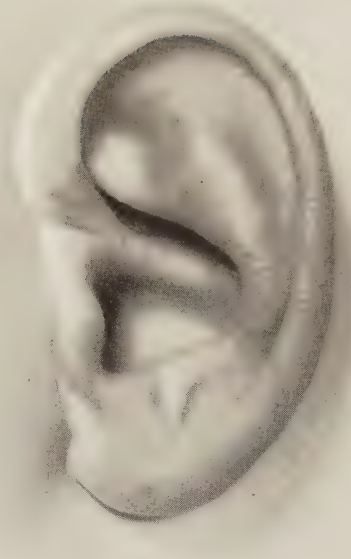

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editorial

PROFESSIONAL STANDARDS OF PRACTICE — MANDATORY OR VOLUNTARY?

We have arrived at the point where everyone recognizes that pharmacy is one of the most regulated professions. This has occurred for many reasons.

Historically, the necessity for regulation grew out of the need to assure that the drug supply of the nation was "pure and unadulterated." Thus, official compendia such as the USP (The Pharmacopeia) and the N.F. (National Formulary) were established. At the same time local, state and federal "pure food and drug laws" were enacted.

Also, through the years pharmacists have sought to upgrade the profession, advance their professional interests and seek remedies for most of their perceived problems through laws and regulations. At the same time, especially in recent years, legislators and now consumer activists have initiated legislative proposals in an attempt to regulate the practice of pharmacy not only in general terms, but often in minute detail.

There are two controversial issues that have emerged in the past decade which a number of state pharmaceutical associations have tried to resolve by legislation or regulation: continuing education (C.E.) and patient medication profiles.

Controversy has prevented agreement on a specific law for a CE requirement for relicensure in Maryland. In the meantime, the MPhA Pharmacy Practice Committee has recommended that an MPhA committee set up a procedure for evaluating CE programs and assigning credits with the view of MPhA certification on a voluntary basis of those who meet the criteria.

In the area of patient medication profiles, a bill initiated by a state legislator to require profiles failed of enactment. Patient profiles are already a standard of good pharamcy practice adopted by the MPhA Board of Trustees. The MPhA Pharmacy Practice Committee is now recommending the establishment of a procedure for certification on a voluntary basis of these pharmacies which maintain and properly utilize profiles according to specified criteria.

These recommendations for voluntary compliance with requirements, standards and criteria developed by one's peers will be presented to the MPhA House of Delegates for debate.

Here is an opportunity for the pharmacists of Maryland to show an awareness of both society's and the profession's requirements in order to effectively discharge their legal and professional responsibilities in serving the health care needs of the public.

The ability and commitment to work through professional societies such as MPhA to develop high voluntary standards of pharmacy practice, to adopt them, and to implement them, are hallmarks of a true profession. Such concrete action would be evidence that would clearly demonstrate that pharmacists' first priority is to serve the pharmaceutical service needs of the public in the most effective manner that is possible.

The results are bound to be a giant step toward perception by the public, other health professions, the courts, governmental agencies and legislators of pharmacists as primarily health care professionals. Even the best public relations programs can not for long supplant the "realities" or facts as perceived by the various publics who confront us. Legislative efforts may in many cases only result in temporary respites, in the end often counterproductive. The old adage "actions speak louder than words" is truly appropriate in this context.

The course of voluntary response to the solution of pharmacy's responsibilities is the path most likely to prevent further governmental regulatory intervention.

— *Nathan I. Gruz*

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calendar MP

September 9 (Thursday) — Maryland Society of Hospital Pharmacists Meeting, Johns Hopkins Hospital, Baltimore, Maryland.

September 19-23 (Sunday, Monday, Tuesday, Wednesday, Thursday) — NARD Convention, San Francisco.

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NPhA ANNUAL MEETING LOS ANGELES, AUGUST 1-5

The National Pharmaceutical Association will host their Annual Convention this year from August 1-5 at the Marriott Hotel in Los Angeles, California.

The National Pharmaceutical Association is a predominantly Black organization dedicated to the solution of problems and peculiarities encountered in the practice of pharmacy within the inner cities nationwide. According to a release by the association, "There will come a time, hopefully, when the need for our Black National Pharmaceutical Association will no longer exist — a time when the problems of a Black Pharmacist practicing ghetto pharmacy dominated by Medi-caid prescriptions and threatened by our own Brothers intent on ripping off the establishment exemplified by us will no longer exist. . . . Until that time arrives, however, our National Pharmaceutical Association dedicated to the problems peculiar to our own group alone, is a necessary and viable organization."

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Please review the prescribing information summarized on the back of this page.

*Ayd, F.J., Jr. (Ed.): Int. Drug Ther. Newslett. 7(9/10):35-50 (Nov./Dec.) 1972.

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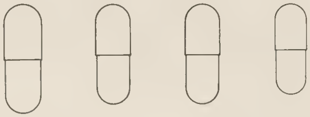
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Contraindications: The concomitant use of monoamine oxidase inhibiting compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur in patients receiving such combinations. The potentiation of adverse effects can be serious, or even fatal. When it is desired to substitute Tofranil-PM, brand of imipramine pamoate, in patients receiving a monoamine oxidase inhibitor, as long an interval should elapse as the clinical situation will allow, with a minimum of 14 days. Initial dosage should be low and increases should be gradual and cautiously prescribed. The drug is contraindicated during the acute recovery period after a myocardial infarction. Patients with a known hypersensitivity to this compound should not be given the drug. The possibility of cross-sensitivity to other dibenzazepine compounds should be kept in mind.

Warnings: *Usage in Pregnancy:* Safe use of imipramine during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed.

Extreme caution should be used when this drug is given to:

—patients with cardiovascular disease because of the possibility of conduction defects, arrhythmias, myocardial infarction, strokes and tachycardia;

—patients with increased intraocular pressure, history of urinary retention, or history of narrow-angle glaucoma because of the drug's anticholinergic properties;

—hyperthyroid patients or those on thyroid medication because of the possibility of cardiovascular toxicity;

—patients with a history of seizure disorder because this drug has been shown to lower the seizure threshold;

—patients receiving guanethidine or similar agents since imipramine may block the pharmacologic effects of these drugs.

Since imipramine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as operating an automobile or machinery, the patient should be cautioned accordingly.

Usage in Children: Tofranil-PM, brand of imipramine pamoate, should not be used in children of any age because of the increased potential for acute overdosage due to the high unit potency (75 mg., 100 mg., 125 mg. and 150 mg.). Each capsule contains imipramine pamoate equivalent to 75 mg., 100 mg., 125 mg. or 150 mg. imipramine hydrochloride.

Precautions: It should be kept in mind that the possibility of suicide in seriously depressed patients is inherent in the illness and may persist until significant remission occurs. Such patients should be carefully supervised during the early phase of treatment with Tofranil-PM, brand of imipramine pamoate, and may require hospitalization. Prescriptions should be written for the smallest amount feasible.

Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, Tofranil-PM, brand of imipramine pamoate, may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.

Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.

An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.

In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g., paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.

Avoid the use of preparations, such as decongestants and local anesthetics, which contain any sympathomimetic amine (e.g., adrenalin, noradrenalin), since it has been reported that tricyclic antidepressants can potentiate the effects of catecholamines.

Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.

Both elevation and lowering of blood sugar levels have been reported.

Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential, since there is limited clinical experience.

Adverse Reactions: Note: Although the listing which follows includes a few adverse reactions which have not been reported with this specific drug, the pharmacological similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when imipramine is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.

Neurological: Numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue); drug fever; cross-sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdominal cramps, black tongue.

Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation or depression of blood sugar levels.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.

Dosage and Administration: In adult outpatients, therapy should be initiated on a once-a-day basis with 75 mg./day. This may be increased to 150 mg./day which is the dose level which usually obtains optimum response. If necessary, dosage may be increased to 200 mg./day. Dosage should be modified as necessary by clinical response and any evidence of intolerance. Daily dosage may be given at bedtime, or in some patients in divided daily doses.

Hospitalized patients should be started on a once-a-day basis with 100-150 mg./day and may be increased to 200 mg./day. Dosage should be increased to 250-300 mg./day if there is no response after two weeks.

Following remission, maintenance medication may be required for a longer period of time at the lowest dose that will maintain remission. The usual adult maintenance dosage is 75-150 mg./day on a once-a-day basis, preferably at bedtime.

In adolescent and geriatric patients, capsules of Tofranil-PM, brand of imipramine pamoate, may be used when total daily dosage is established at 75 mg. or higher. It is generally unnecessary to exceed 100 mg./day in these patients. This dosage may be given once a day at bedtime or, if needed, in divided daily doses.

How Supplied: Tofranil-PM, brand of imipramine pamoate: Capsules of 75, 100, 125 and 150 mg. (Each capsule contains imipramine pamoate equivalent to 75, 100, 125 or 150 mg. of imipramine hydrochloride.)
(B) 98-146-840-A(9/75) 667120

For complete details, including dosage and administration, please refer to the full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

SA 11472

news MP

GILPIN PURCHASES THE JOHN B. DANIEL COMPANY

James E. Allen, Chairman and President of the Henry B. Gilpin Company recently announced the company's acquisition of the John B. Daniel Company, Inc. from the Cenco Medical Industries Corporation.

Charles C. Wilson, an experienced wholesale drug executive and former Treasurer and Operations Manager of John B. Daniel, Inc., has been promoted to Vice President and General Manager. Mr. Robert L. Garges has retired as President of the John B. Daniel Company to devote more time to his personal interests. Mr. Allen stated that Gilpin is pleased that Mr. Garges will serve as a consultant to the John B. Daniel Company and maintain his interest in the firm.

With headquarters in the nation's capital, The Henry B. Gilpin Company now operates seven full service wholesale drug houses, located in: Atlanta, Georgia; Baltimore, Maryland; Dover, Delaware; Indianapolis, Indiana; Memphis, Tennessee; Norfolk, Virginia; and Washington, D.C. in addition to its surgical supply and service merchandising subsidiaries in Virginia, Maryland, and Indiana.

CHANGE OF ADDRESS

When you move—

Please inform this office four weeks in advance to avoid undelivered issues.

"The Maryland Pharmacist" is not forwarded by the Post Office when you move.

To insure delivery of "The Maryland Pharmacist" and all mail, kindly notify the office when you plan to move and state the effective date. APhA members—please include APhA number.

Thank you for your cooperation.

Nathan I. Gruz, Editor
Maryland Pharmacist
650 West Lombard Street
Baltimore, Maryland 21201

Reserve the date now . . .

AUGUST 1 - 2 - 3

Maryland's Largest Show for 1976

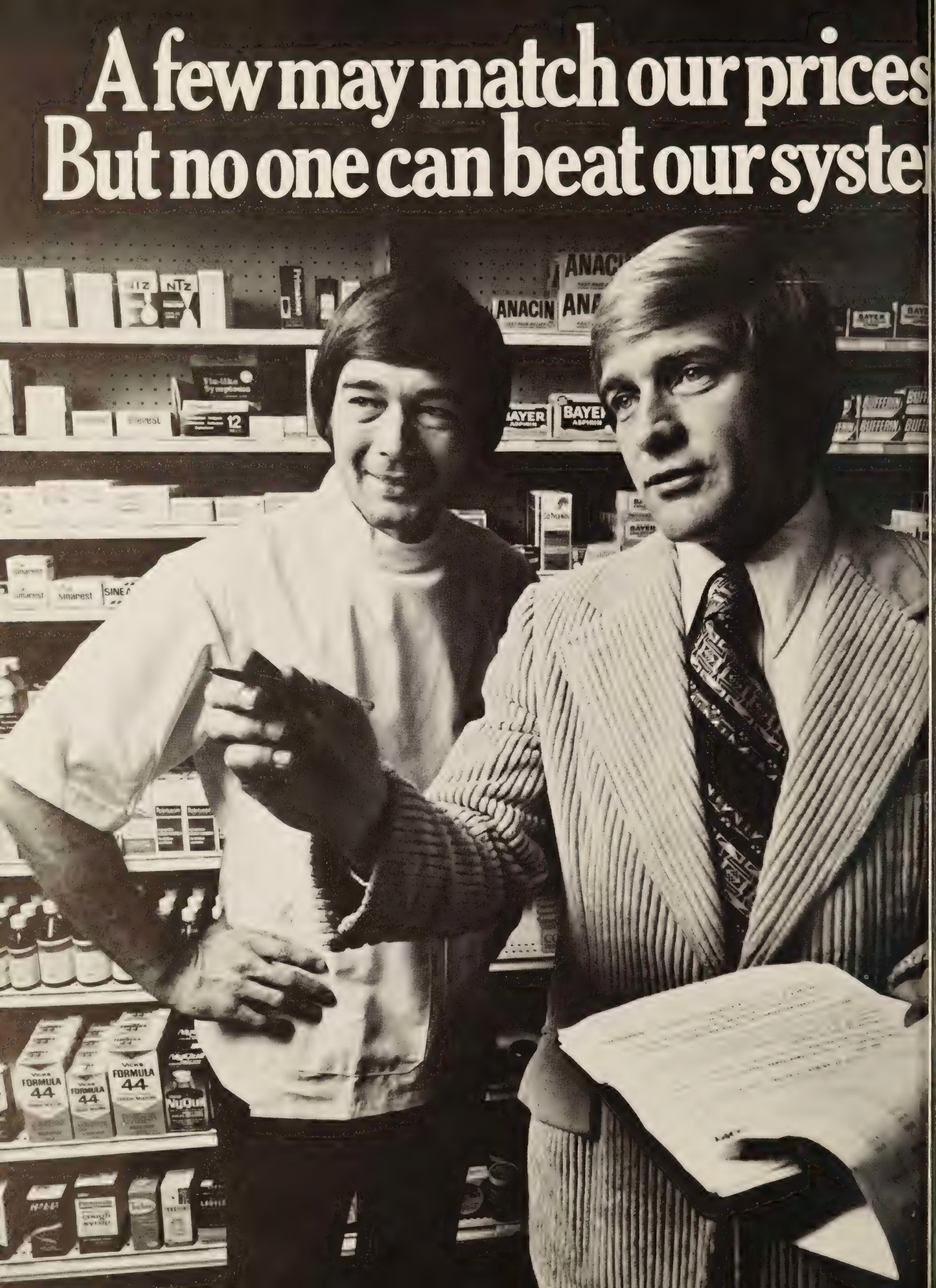
F. A. DAVIS & SONS, INC.

FALL & HOLIDAY SHOW

1. Over 100 Leading Manufacturers Represented
2. Thousands of Profitable Products
3. Unusual New Items, Toys, Cosmetics and Gifts
4. Many Prizes
5. Evening Buffet
6. Show Specials

Place: MARTIN'S WEST – off Beltway Exit 17

Time: Sunday, August 1 . . . . 1 P.M. to 10 P.M.
Monday, August 2 . . . . 1 P.M. to 10 P.M.
Tuesday, August 3 . . . . 1 P.M. to 10 P.M.


A few may match our prices
But no one can beat our syste
NTz
ANACIN
BAYER
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Vicks FORMULA 44
NyQuil
cough syrup

We're not fooling ourselves.

Gilpin's grown as much as it has in the past 130 years because we've beat a lot of people on price. And we're not about to change now.

The problem is, a lot of items these days will cost the same at virtually all wholesalers. So now we're not talking just price.

Now we're talking Datarex.®

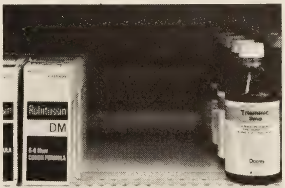
Datarex® is a completely automated, inventory management system designed to cut your labor costs while increasing your sales and profits. Individualized to your exact specifications, your Datarex® system will be as extensive or as limited as you want it to be.

Beating the high cost of yesterday's prices.

It's been estimated that the average pharmacy loses up to 2% of its bottom-line profits because its price stickers have failed to keep pace with inflationary changes.

Datarex® makes all the adjustments automatically. *Automatically.*

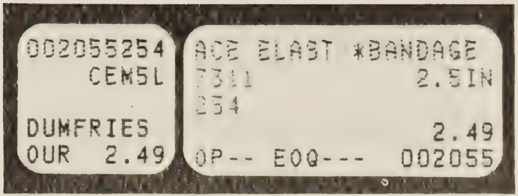
The hole in your shelf, the drop in your curve.



We found out something else about the average pharmacy: it loses up to 15% of its possible sales because of outs—those empty shelves.

Datarex® puts an end to outs.

Coded shelf labels work in conjunction with the computerized in-store ordering terminal and the Datarex® CRT order-entry system to keep you in-stock. All the time.



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002055254   ACE ELAST *BANDAGE
    CEM5L   7311          2.5IN
            254
DUMFRIES                   2.49
OUR  2.49   OP-- EOQ---  002055
```

Should you be doing what you're doing?

Right now you're probably spending a lot of your time checking stocks, ordering and filling shelves.

What you should be doing is managing.

In minutes, anyone in your store can be running the whole system, freeing your management team to do the jobs that build your profits.

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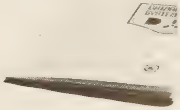
A Datarex® system can cost as little as $50 a month.

You see, we're a total-service wholesaler, and we want all your business. All of it. So we know we can't afford to charge you too much for any one service—even a service like Datarex.®

As we said, we're not fooling ourselves.

You can't beat the system:
The Datarex® system from Gilpin.



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Attention Harrison L. Leach
Vice President Retailer Services

I want to know more about the system. Send me your free Datarex® booklet.

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Address
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CONTAMINATION INCIDENCE IN AN IV ADMIXTURE PROGRAM

By Peter P. Lamy and Tuong Nguyen

Introduction

Septicemia, with sometimes fatal results, has been reported due to non-sterile intravenous solutions and the use of contaminated administration sets (1, 2). Contamination rates of IV solutions and admixtures fluctuating from one to 38 percent have been reported varying with the types of systems studied (glass or plastic), the testing condition, the testing techniques and the materials used.

Theoretically, therefore, each IV admixture should be tested for sterility before it reaches the patient. This, of course, is not feasible. Testing requires often 24 to 48 hours, precluding the immediate implementation of the physician's treatment plan.

Thus, it is important that each laboratory at a minimum periodically determine its level of efficiency as far as sterility is concerned.

Purpose

The purpose of this study was to establish a quality assurance program to monitor through sterility testing, both intravenous admixtures immediately after preparation in the IV laboratory and during fluid administration.

Methodology

All equipment involved in the testing procedure was tested for conformity with Federal Standard 209a (11). Rates of air flow within the laminar flow units were measured with a thermo-anemometer. H.E.P.A. filters were tested by the use of a particle counter. Microbial contamination levels inside the units were also determined by the impaction on solid surface air sampling method (3).

The study was conducted at a large core city hospital which prepares approximately 150,000 IV admixtures per year. Using a commercially available thioglycollate medium, the testing was performed on:

1. new and unused IV fluids and administration sets (controls)
2. IV admixtures prepared by the pharmacy before they left the IV laboratory, and
3. IV admixtures and administration sets sampled at bedside during fluid administration to the patient.

All samples were prepared in a horizontal laminar flow unit with the exception of samples obtained at the patient's bedside from in-use bottles and administration sets. The investigator observed strict aseptic techniques during all sampling procedures. During the course of the study, prefilters of the laminar flow units were changed every two months.

The thioglycollate medium (BBL[a]) was obtained packed under vacuum and sealed with a rubber stopper. This permitted the safe inoculation with samples collected right in the patient care areas. Fluid Thioglycollate Medium, U.S.P. was chosen as the sole medium for both bacteria and fungi as it is capable of supporting aerobes, anaerobes, and fungi. Deeb and Natsios (4) successfully demonstrated fungi proliferation in this medium. The U.S.P. sterility test (5) recommends 80 ml. of medium for testing at least 10 ml. of the product if the content of the container (i.e., IV bottle) is greater than 50 ml.

Throughout the study, all cultures as well as controls were incubated at 35°C for at least 7 days. For purpose of identification, subcultures were prepared on blood agar medium and routine procedures for identification of organisms were followed with the assistance of the Infectious Diseases Division and Bacteriology Laboratory of the study hospital.

Tuong A. Nguyen, M.S., is Assistant Manager, Store #14, Read's Drugstores Inc., Baltimore, Maryland 21206. At the time of the study, she was a pharmacy resident at Maryland General Hospital, Baltimore, Maryland 21201 and a graduate student, Institutional Pharmacy Programs, at the University of Maryland, School of Pharmacy.

Peter P. Lamy, Ph.D., F.C.P. is a Professor of Pharmacy, and Director of Institutional Pharmacy Programs, University of Maryland School of Pharmacy and the University of Maryland Hospital, Baltimore, Maryland 21201.

This article was abstracted from a thesis submitted in the Graduate School of the University of Maryland in partial fulfillment of the requirements for the Master of Science degree.

In all phases, a positive control procedure of the medium was performed by injecting 0.1 ml. each of very dilute E. coli (an aerobe), B. fragealis (an anaerobe), and A. Fumigatus (a fungi) suspension, into each bottle containing the test medium. Growth determined by turbidity of the medium indicated the adequacy of the thioglycollate medium. Negative controls were obtained by incubating sterile bottles containing the test medium to which no inoculum had been added.

Table I depicts the study solutions used. Administration sets used included standard administration sets, Y type sets, sets with calibrated chamber, and central venous pressure manometer.

Testing of Controls: Control samples of IV solutions consisted of 10 ml. of fluid from unused IV bottles chosen from the active stock and added to the test medium.

Testing of IV Admixtures Prepared by the Pharmacy: Samples of IV admixtures were obtained from the IV laboratory and decentralized pharmacies. These included freshly prepared admixtures as well as those which were returned unused and unopened from the patient care areas. Samples were collected in a horizontal laminar flow unit by withdrawing a single 10 ml. aliquot using a disposable syringe with a 20 gauge needle. This was added to the medium bottle through its rubber stopper diaphragm. Prior to all sampling the IV bottle tops were cleansed with 70 percent isopropyl alcohol.

Testing of In-Use Solutions, Admixtures and Administration Sets: In-use fluids were randomly collected at the patient's bedside when the bottles were approximately half-empty. Samples were obtained in the Medical Patient Care Units, in the acute Stoke and Intensive Care Units, and in the Institute of Emergency Medicine. Half of the bottles tested had been prepared on the patient care areas by nursing personnel. Some of these did not contain additives. The other half had been prepared by the pharmacy.

The sampling of in-use IV bottles was performed by withdrawing a 10 ml. aliquot through the medication port of the seal, using a 10 ml. sterile disposable syringe with a 20 gauge needle. Before inserting the needle, the area surrounding the medication port was cleansed with 70 percent isopropyl alcohol. Care was taken to avoid touching the spike with the sterile needle. The sample was added to the commercially available medium through its rubber stopper seal.

In-use IV sets were tested for contamination as follows:

1. The lower part of the tubing between the area near the Y-injection site and the patient arm was clamped, and the upper clamp controlling the flow rate was released.

2. A 10 ml. sample of the IV fluid was withdrawn from the Y-injection site, using a sterile disposable syringe with a 20 gauge needle. Prior to this, the Y-injection site was cleansed with 70 percent isopropyl alcohol.

3. The sample was added to the medium as outlined above.

4. The lower IV clamp was released and the upper clamp adjusted for normal fluid flow.

Results

Experimental Results

Of 197 pharmacy-prepared admixtures tested, none showed any growth (Table II). The sterility of admixtures was also shown to be maintained over a period of two months under refrigeration.

IV admixutres and IV sets tested during administration to the patient showed a very low contamination rate (Table II). Of 168 in-use fluids, only one bottle prepared by nursing personnel and one set were found to be contaminated. Both were contaminated with anaerobic Gram positive cocci, suggestive of touch contamination rather than airborne contamination. It is interesting that no hyperalimentation solution was found to have been contaminated. This seems to contradict Deeb and Natsios's report (4) of a higher rate of contamination found in hyperalimentations compared to the more conventional solutions.

The total absence of growth in the control admixtures verifies that the containers were sterile prior to use and that the sampling techniques and culturing methods were properly performed.

Comments

While this particular study showed a very acceptable level of quality assurance, other contamination values range from zero to 38 percent (6-10). Reports thus vary widely, depending upon the conditions under which the studies were conducted, the sample size, the testing techniques, and methods used. Thus, it is apparent that hospital pharmacists must establish routine tests of IV admixtures.

Large volume parenterals, in addition to being sterile, must also be progen-free. It is necessary to set up a quality assurance program for the detection of pyrogens on the same basis as a quality assurance program for the detection of viable contaminants.

(Continued on page 22)

Septra DS. The same reliable formulation but doubled in tablet strength, lower in cost.

For patients with recurrent urinary tract infections

Septra DS: the same Septra efficacy in recurrent cystitis, pyelitis, and pyelonephritis due to susceptible organisms

Septra DS: the same Septra spectrum—E coli, Klebsiella-Enterobacter, P mirabilis, P vulgaris, P morganii

Septra DS: the same b.i.d. dosage schedule, but one tablet instead of two

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections.

The recommended quantitative disc susceptibility method *(Federal Register 37:* 20527-20529, 1972) may be used to estimate bacterial susceptibility to Septra. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Septra therapy. "Intermediate susceptibility" also indicates that response is likely and "Resistant" that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or

New Septra® DS

Each tablet contains: 160 mg trimethoprim and 800 mg sulfamethoxazole

Double Strength
tablet dosage:
1 tab b.i.d.

jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **At present, data are insufficient to recommend use in infants and children under 12.**

Precautions: Use with caution in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur (frequently dose-related). During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Septra. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia; cross-sensitivity may exist with these agents. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 Septra DS tablet or 2 Septra plain tablets or 4 teaspoonfuls (20 ml) every 12 hours for 10 to 14 days. Shake suspension well before using.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet, 2 tablets or 4 teaspoonfuls (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Septra DS (Double Strength) tablets containing 160 mg trimethoprim and 800 mg sulfamethoxazole — bottles of 60 tablets. Septra tablets containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 40, 100, 500, and 1000 tablets and strip packages of 100 individually packed tablets. Oral suspension, containing the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole in each teaspoonful (5 ml), cherry flavored — bottles of 450 ml.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

U.S.P. DRUG PRODUCT PROBLEMS REPORT

Reported by the United States Pharmacopeial Convention

The following are some of the recalls, product improvements, and explanations resulting from the Drug Product Defect Reporting Program.* The product and company names have intentionally been omitted; and no reflection on any specific manufacturer, distributor, pharmacist, or product is intended or should be inferred from the case studies. It is hoped that these examples will indicate the type of results which this program can bring about, as well as indicating to the pharmacist reader some of the areas where he or she may want to be alert; e.g.: Package insert information, package designs, labeling, unusual or improper drug product appearance.

A. "Pediatric" Designation Removed from Name

In response to reports concerned about the possibility of confusion over the designation as "pediatric" of the stronger of the two liquid dosage forms of an asthma preparation, the manufacturer has agreed to remove the designation. Apparently, the term "pediatric" in the name of the liquid suspension led several pharmacists to feel that it should be the less potent of the two. In fact, the "pediatric" preparation was twice as potent as the other elixir form; furthermore, it was sometimes used by adults. The new labels are already in production.

B. Salicylic Acid Recalled

Discolored salicylic acid crystals were reported by pharmacists in New Jersey and Massachusetts. An FDA follow-up investigation at the firm revealed that several quality control deficiencies existed. Further, after retesting the drug, the firm confirmed that it did not meet USP specifications. The company initiated a voluntary recall of the lot involved and promised corrective action on the noted control deficiencies.

C. Package Insert Revised

Complaining "Doesn't anyone read these anymore?," a report submitted by a New York state community pharmacist pointed out that the Clinical Pharmacology and Physical and Psychological Sections of a package insert for an anti-anxiety drug were confusing and contradictory. After reviewing the insert, the manufacturer agreed with the pharmacist's comments and is instituting a revision of the insert to clarify the intended meaning.

D. "Swollen Stoppers" Resulted in Processing Modification

Swollen stoppers on vials of sterile light mineral oil intended for use as a lubricant were reported by a California hospital pharmacist. Analysis, sterility testing, and testing for presence of any gas formation were done by the manufacturer which showed no evidence that the mineral oil was unsuitable for use. However, the manufacturer does plan to modify their processing to eliminate this problem from future lots. The firm's response to the pharmacist indicated that the swelling was probably caused by absorption of a small quantity of mineral oil into the stopper.

E. Subpotent Birth Control Tablets Recalled

We believe that a report submitted by a Wisconsin community pharmacist was instrumental in leading to the recall of an oral contraceptive agent by the manufacturer. The pharmacist noted that the tablets were fading when exposed to light. Assay of the returned stock revealed that the ingredient, ethinyl estradiol, was below claimed potency.

F. Applicator Redesigned to Eliminate Broken Glass Contact

New production procedures will be instituted by the manufacturer of unit dose applicators of Green Soap Tincture, N.F. following a Drug Product Defect Report submitted by a blood bank supervisor in a New York City hospital. She had noted three deficiencies: 1) No lot number on the plastic containers. 2) Contents evaporated in some units. 3) Smashed glass particles came into contact with patients following crushing of the unit for application to patient's skin.

The firm has recognized these deficiencies and has instituted new production procedures to place the lot number on each unit and is implementing new design features for the plastic units in an effort to overcome the other two problems.

G. Caking Ophthalmic Corticosteroid Suspension

"STORE UPRIGHT" will be added to the label of each bottle of an ophthalmic suspension by the manufacturer who

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**The work upon which this publication is based was performed by the USP Convention pursuant to Contract No. FDA 223-72-3088 with the Public Health Service, Food and Drug Administration, Department of Health, Education and Welfare.*

concurred with a Pennsylvania pharmacist's observations. When the bottle was not shipped or stored in an upright position, the suspension became caked to the top of the container and could not be shaken loose. The pharmacist's report suggested that if the active ingredient was in this solid cake, this could result in patients not getting the proper dose.

H. OTC Cough Syrup Reformulated

An Iowa community pharmacist who had reported a "milky layer" on top of a popular OTC liquid cough preparation sent USP a copy of the reply which he had received from the manufacturer. It indicated that, on analysis, the floating precipitate was identified as sorbic acid, an antimicrobial preservative. Although the firm stated that the safety and efficacy of the product were not affected and that it was only an esthetic situation, they reformulated the cough syrup to eliminate the problem.

I. One Product Labeled as Two

Two California community pharmacists reported that they had received stock of an OTC cough syrup labeled as one product on the front and a different product on the back. An inspection of the firm's entire inventory stock found additional mislabeled units. The company plans to destroy all mislabeled stock.

J. Package Insert Revised

An astute Wisconsin community pharmacist noted that the package insert dosage and administration directions for an anthelmintic preparation were confusing. As the product is covered by a New Drug Application (NDA), the report was reviewed by officials in the NDA branch of the Food and Drug Administration who agreed with the pharmacist and directed the manufacturer to revise the package insert.

K. Capsule Source Changed

"Sorbitol bloom" was the explanation given for a white powder forming on the surface of dioctyl sodium sulfosuccinate capsules. The manufacturer informed the Arizona hospital pharmacist, who had reported the powder-covered capsules, that their capsule vendor has used sorbitol in the formulation of the soft gelatin capsules primarily to prevent breakdown of the gelatin by the active ingredient. The manufacturer indicated that because of this problem, he would fill future orders with capsules obtained from another source.

L. Antihistamine Tablets Recalled

Differences in the ingredients statements on the bottle label and the package insert of an antihistamine preparation precipitated a report from a Brooklyn, N.Y. pharmacist. The manufacturer initiated a recall of the lot involved after the discrepancy was confirmed by an FDA follow-up investigation. The firm had used old package inserts which did not list the current ingredients.

M. Anti-Diarrheal Mixture Recalled

A community pharmacist in New Jersey noted than an OTC anti-diarrheal mixture was too thick for dispensing. The manufacturer felt that the problem was possibly due to product exposure to extreme temperatures, causing the mixture to jel in the bottles. A recall of the lot was made.

N. Fluoride Oral Rinse Reformulated

A black precipitate in all her stock of a fluoride oral rinse was reported by a New York state community pharmacist. The manufacturer investigated the matter and identified the sediment as dye and flavor material. In the future, the firm will reduce the quantities of the dye and flavor to avoid the sedimentation problem.

O. Toluene Labeled as Acetone

A surgeon's comments to a Pennsylvania hospital pharmacist that redness and blotchiness resulted when a solvent labeled as acetone was used to remove bandage adhesive from patients first called attention to a possible label mixup. The pharmacist further noted that it did not smell like acetone and reported the problem. When analysis of a field sample by FDA revealed the solvent to be toluene, the manufacturer recalled the lot.

P. Use of Ophthalmic Preparation in Surgery

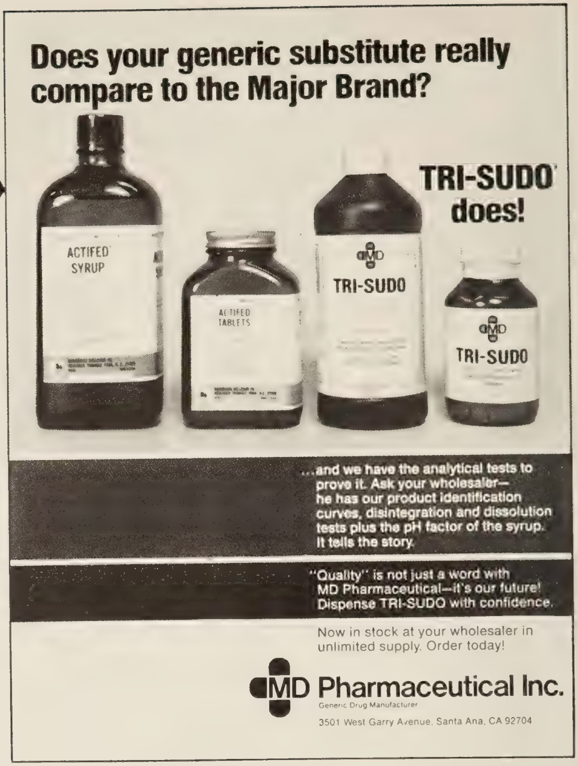
In response to a Kentucky hospital pharmacist's report that their Procaine Hydrochloride Injection was causing an inflammatory reaction of the eyelids when used in cataract surgeries, the manufacturer's vice president of quality control researched the problem. He replied that, on analysis, the procaine hydrochloride injection in question met all USP XIX specifications for the injection. However, he noted that his company's product, presented in a multiple dose vial, was therefore required to contain an antimicrobial preservative. Benzyl alcohol was being used. Two other manufacturer's products, which the pharmacist reported had not caused inflamation, did not contain benzyl alcohol. The manufacturer pointed out that USP XIX, page 703, states that "Where intended for use in surgical procedures, ophthalmic solutions, although they must be sterile, should not contain antimicrobial agents, since they may be irritating to the ocular tissues." Based on this statement and other sources, the manufacturer concluded that the inclusion of benzyl alcohol in their injection formulation made it inappropriate for use in cataract surgery.

Q. Bottle Manufacture Contributes to Particulate Matter

White floating particles in dropper containers of atropine sulfate 1% ophthalmic solution were reported by a New Jersey hospital pharmacist. Assays of the atropine sulfate indicated that it was within specification limits for content and pH. After extensive testing of samples, the manufacturer

(Continued on page 21)

Dear Pharmacist: This misleading ad provides reasons why you should continue to dispense ACTIFED®



Does your generic substitute really compare to the Major Brand?

TRI-SUDO® does!

...and we have the analytical tests to prove it. Ask your wholesaler—he has our product identification curves, disintegration and dissolution tests plus the pH factor of the syrup. It tells the story.

"Quality" is not just a word with MD Pharmaceutical—it's our future! Dispense TRI-SUDO with confidence.

Now in stock at your wholesaler in unlimited supply. Order today!

MD Pharmaceutical Inc.
Generic Drug Manufacturer
3501 West Garry Avenue, Santa Ana, CA 92704

Some hard facts from the makers of ACTIFED®

TRI-SUDO® **CLAIM:** TRI-SUDO® Syrup is a comparable generic substitute for ACTIFED®.

FACT: B.W. Co. Quality Control labs analyzed TRI-SUDO® Syrup (Lot Nos. 160000 and 160150) and found it did not contain any triprolidine hydrochloride, one of the two active ingredients in ACTIFED®.

TRI-SUDO® **CLAIM:** TRI-SUDO® had the analytical tests to prove comparability.

FACT: B.W. Co. obtained from a wholesaler TRI-SUDO® literature entitled, "Technical Data Study" and found it does *not* prove comparability. The infra-red absorption spectra shown in the test results as proof of comparability do *not* show triprolidine but the solvent used in the assay procedure.

CONCLUSION:

Two lots of TRI-SUDO® syrup were examined by our Quality Control labs and were found to contain *no* triprolidine, one of the essential ingredients of our product.

You can be sure of quality controlled products when you dispense ACTIFED® Syrup and Tablets.

For brief summary of prescribing information, please see adjoining column

The decongestant/ antihistamine chosen by NASA for Apollo, Skylab and Apollo-Soyuz space missions.

ACTIFED®
Tablets and Syrup

Description: Each scored tablet contains Actidil® brand Triprolidine Hydrochloride 2.5 mg and Sudafed® brand Pseudoephedrine Hydrochloride 60 mg. Each 5 cc teaspoonful of the syrup† contains Actidil® brand Triprolidine Hydrochloride 1.25 mg and Sudafed® brand Pseudoephedrine Hydrochloride 30 mg
†Preservatives: sodium benzoate 0.1%, methylparaben 0.1%.

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the Indications as follows:
"Probably" effective: For the symptomatic treatment of seasonal and perennial allergic rhinitis and vasomotor rhinitis.
"Lacking substantial evidence of effectiveness as a fixed combination": For the prophylaxis and treatment of the symptoms associated with the common cold.
Final classification of the less-than-effective indications requires further investigation.

Precautions: Although pseudoephedrine hydrochloride is virtually without pressor effect in normotensive patients, it should be used with caution in patients with hypertension. In addition, even though triprolidine hydrochloride has a low incidence of drowsiness, appropriate precautions should be observed.
Adverse Reactions: The great majority of patients will exhibit no side effects. However, certain patients may exhibit mild stimulation or mild sedation—no serious side effects have been noted.
Dosage and Administration:

	TABLETS		SYRUP teaspoonfuls (5 cc)	
Adults and children over 6 years of age	1	3 times a day	2	3 times a day
Children 4 months through 6 years of age	½		1	
Infants up to 4 months of age	–		½	

How Supplied:
ACTIFED® TABLETS Bottles of 100 and 1000, bottles of 30 with child resistant cap. ACTIFED® SYRUP Bottles of 1 gallon, 1 pint, and bottles of 4 oz with child resistant cap.

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Crabs, head and body lice, nits—the only medicine anyone needs to stop them dead is A-200 Pyrinate, the No. 1 lice killer. It has the highest turnover rate of any pediculicide.

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A200
PYRINATE

No. 1 Lice Medicine

Crab Louse (Phthirus pubis)

PRODUCT PROBLEMS

(Continued from page 19)

identified the white amorphous solids as esters of a long chain fatty acid, which may be attributable to the agent used to release the container from its mold during manufacturing. The firm appreciated having had the problem brought to their attention.

R. Change to Paper Labels

"Labeling is difficult to read and appears to be wearing off" was the comment received from a hospital pharmacist in Connecticut regarding ampuls of an electrolyte solution. As a result of this report and reports from other pharmacists, the manufacturer is converting to a paper label which they feel will be more legible and will be able to withstand the wear of handling.

INSTITUTIONAL PHARMACY

(Continued from page 15)

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TABLE I

LIST OF SOLUTIONS STUDIED

Dextrose Injection, U.S.P., 5%

Dextrose Injection, U.S.P., 10%

Sodium Chloride Injection, U.S.P., 0.45%

Sodium Chloride Injection, U.S.P., 0.9%

Dextrose and 0.2% Sodium Chloride Injection, U.S.P., 5%

Dextrose and 0.45% Sodium Chloride Injection, U.S.P., 5%

Dextrose and 0.9% Sodium Chloride Injection, U.S.P., 5%

Dextrose and 0.2% Sodium Chloride Injection, U.S.P., 10%

Dextrose and 0.9% Sodium Chloride Injection, U.S.P., 10%

Lactated Ringer's Injection, U.S.P.

Lactated Ringer's (Hartmann's Solution) with 5% Dextrose

Amigen (Protein Hydrolysate Injection, U.S.P. - Casein) Injection, 5%

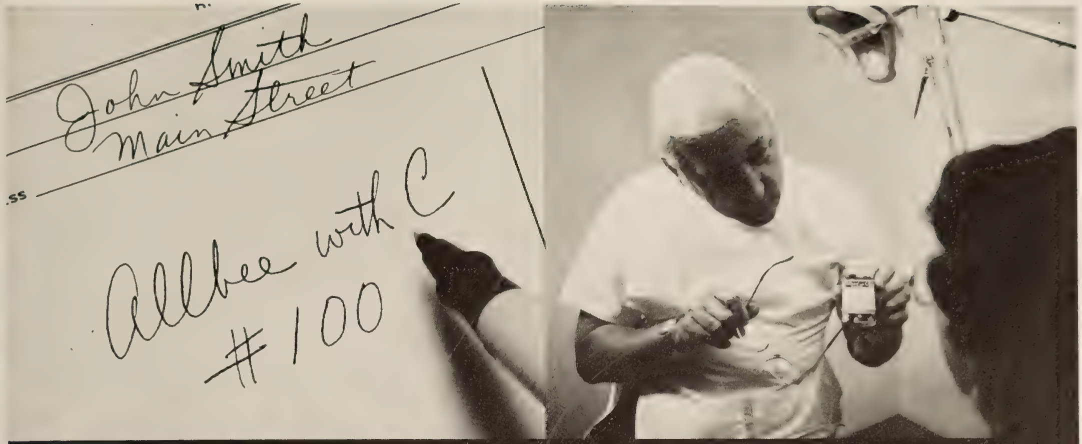
Dextrose Injection, U.S.P., 50%

TABLE II

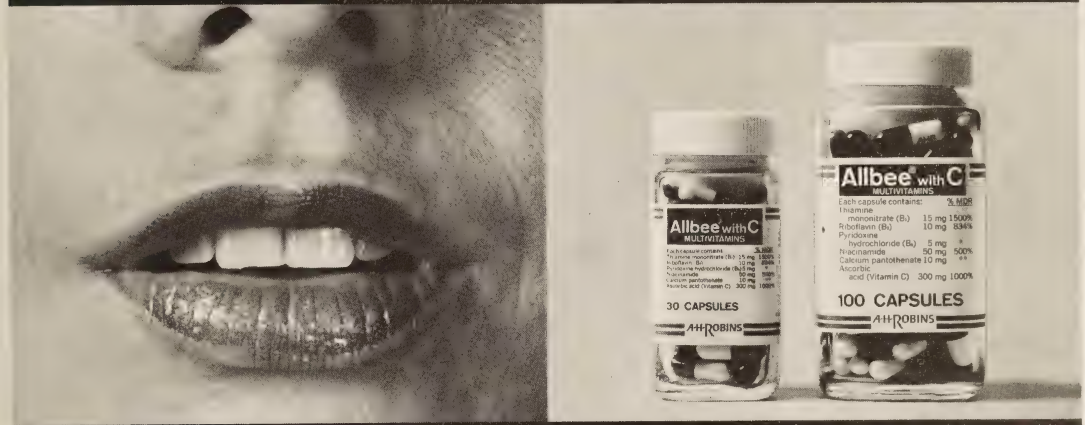
CONTAMINATION OF IV SOLUTIONS, ADMIXTURES AND SETS TESTED BEFORE AND DURING FLUID ADMINISTRATION

Tested Samples	**Contamination Incidence**	
	Number Contaminated/Total Number Tested	Contamination %
Control Solutions	0/100	—
Pharmacy Admixtures (before fluid administration)		
Hyperalimentation	0/67	—
Dextrose-Saline	0/130	—
In-Use Admixtures (during fluid administration)		
IV Bottles	1/84	1.19
IV Sets	1/84	1.19

aBBL — Bioquest Biological Laboratories, Division of Bechton-Dickinson and Co., Cockeysville, Maryland.


John Smith
Main Street
Allbee with C
#100

by prescriptions...professional recommendations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Librium has long been recognized as an effective and safe antianxiety agent. Patients taking Librium seldom experience serious side effects or interference with mental acuity (see summary of product information on following page for additional information). Furthermore, Librium has been used in conjunction with many primary medications.

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One way Roche provides immediate product information is through the Medical Emergency Line. Roche maintains this direct, 24-hour telephone service (201-235-2355) for specific questions concerning Librium or any other Roche product. For inquiries of lesser urgency, Roche information specialists will supply detailed responses by mail. Of course, your Roche representative is prepared to supply you with a variety of informative materials, such as scientific brochures, reprints and bibliographies related to the pharmacology of Librium (chlordiazepoxide HCl) and its clinical applications.

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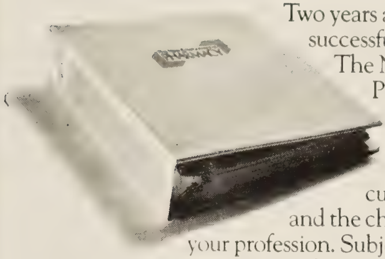
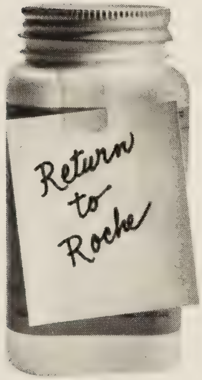
THE NEW ENVIRONMENT OF PHARMACY



Two years ago we initiated a highly successful educational service—The New Environment of Pharmacy. It was designed by pharmacists for pharmacists. The purpose is to keep you informed of current trends in pharmacy and the changing factors affecting your profession. Subjects covered include new government regulations, drug interactions and new concepts and techniques in pharmacy management. If your pharmacy has not already enrolled in this program, write: The New Environment of Pharmacy, Roche Laboratories, Division of Hoffmann-La Roche Inc., P.O. Box 283, Nutley, New Jersey 07110.



LIBERAL RETURN GOODS POLICY

Although the demand for Librium minimizes expiration problems for this product, Roche continues its policy of expediting replacements of all Roche products that may be outdated or discontinued. This liberal policy enables you, as a busy pharmacist, to keep your stock up to date and to maintain a proper inventory.

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chlordiazepoxide HCl/Roche®

5 mg, 10 mg, 25 mg capsules

FOR ALL THE PROFESSIONAL REASONS.

Please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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obituaries

MPhA Member

Mr. Frank F. Levay, owner and operator of Levay's Pharmacy at Fort and Riverdale Avenues since 1940, died on April 14, 1976 at South Baltimore General Hospital after suffering a heart attack.

A native of Baltimore, Mr. Levay was a graduate of Loyola College and a 1940 graduate of the University of Maryland School of Pharmacy. Long active in both civic, professional, and fraternal organizations, Mr. Levay was a member of the Maryland Pharmaceutical Association, the Knights of Columbus, the Glen Burnie Moose Lodge, the Kiwanis Club of South Baltimore, the Optimist Club of South Baltimore and the Stony Creek Democratic Club.

He is survived by his wife, the former Helen M. Akonom; a son, Francis J. Levay, of Riviera Beach; two daughters, Mrs. Mary R. Cole, of Baltimore, and Mrs. Helen U. Von Protz, of San Diego; a sister, Mrs. Myra Mason, of Baltimore, and four grandchildren.

OTHERS

Mr. George Karman, 85, died on April 12, 1976 in Torance, California, following a heart attack. A graduate of Concordia College and the University of Maryland School of Pharmacy, Mr. Karman worked for pharmacies in Baltimore, Ocean City, and Princess Anne County, Maryland, before his retirement in 1969.

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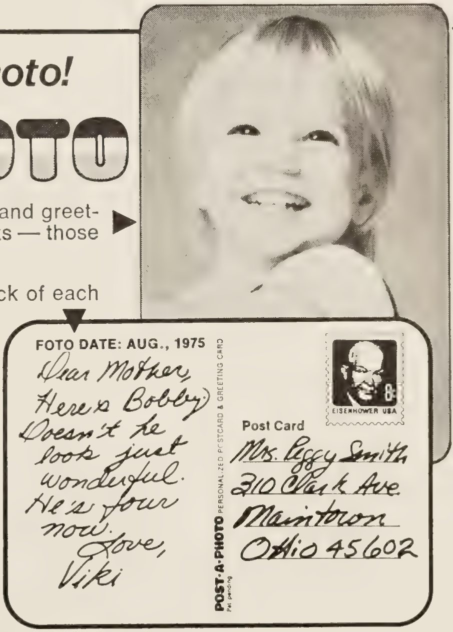

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Dear Mother,
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Doesn't he
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Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

P·M·A

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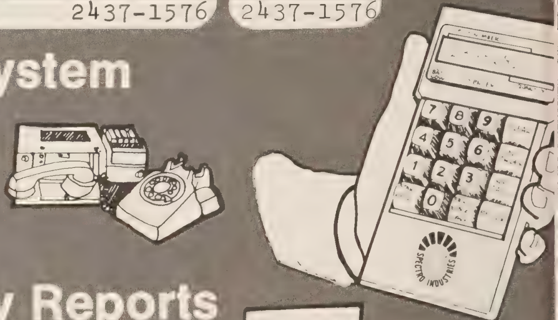

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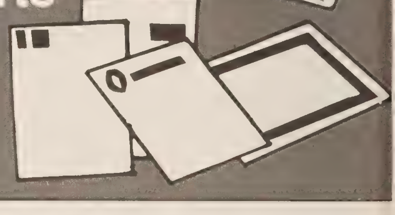

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THE
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JUNE 1976
VOL 52
NO 6

Prescription Price Advertising A Landmark Decision of the U.S. Supreme Court

The Supreme Court Speaks— A Perception of Pharmacy.

An Editorial

Complete Text of Decision In This Issue

September 19-23 — NARD Convention, San Francisco

January 14-21 — MPhA Seminar Tour — Mexico City–Acapulco

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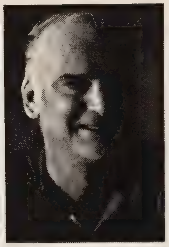

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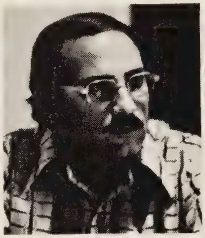

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editorial

THE SUPREME COURT SPEAKS — A PERCEPTION OF PHARMACY

Pharmacists are justified in reacting in outrage to the majority decision and opinions of the United States Supreme Court in voiding all state prohibitions on prescription price advertising. Of course, aside from indignation nothing else can be done, unless perchance some new kind of case some years from now will be heard by the court.

Because we cannot alter the decision, let us see what we can learn from the several opinions — the majority view by Justice Blackmun, the separately stated concurring opinions of Chief Justice Burger and Justice Stewart, and the lone dissenting opinion of Justice Rehnquist.

When you read and study the opinions, including footnotes, published in full in this issue of *The Maryland Pharmacist,* one sees that although the legalistic basis is the protection of the First Amendment of the U.S. Constitution: freedom of speech, the justices were swayed by socio-economic factors and by their perceptions of the role of the pharmacist.

Justice Blackmun refers to suppression of price information hitting the poor, sick and aged the hardest and that this group tends to spend a disproportionate amount of their income on prescription drugs. He asserts that "drug prices vary . . . strikingly."

The learned justices also seem to have swallowed the Federal Trade Commission (FTC) staff's flimsily based prediction that outlawing advertising restrictions would save "millions of dollars per year."

The gratuitous remark of Chief Justice Burger in equating the dispensing services of a pharmacist with the services of a clerk selling lawbooks betrays an appalling ignorance for a member of the highest court. If other cases are adjudicated with similar levels of research and understanding, we fear for the validity of court decisions in other specialized fields.

But the important point is that the Chief Justice seeks to differentiate between the function of pharmacists who "dispense standardized products" and the "traditional learned professions of medicine and law." He says "they render professional *services* of almost infinite variety and nature . . ."

Fortunately for the record, Justice Rehnquist, in his lone dissent, disputes the Chief Justice's differentiations between the pharmacist and other professions. He also emphasizes the "very real dangers that general advertising" might create.

Nevertheless, we must face the crux of the situation which pharmacists have found themselves in since the great decline in compounding set in. Pharmacists lost the mystique associated with compounding. They isolated themselves behind counters and insulated themselves from the people (patients) they served. They became identified primarily with the packaging of "merchandise" — a drug product.

Only pharmacists who established and maintained a personalized relationship with their patients and demonstrated professional services beyond simple dispensing have been able to achieve recognition as health professionals.

Maintaining current knowledge and competency through continuing education, counseling patients on the use of both prescribed and over-the-counter medication, properly using patient medication profiles, achieving acceptance as qualified consultants in drug therapy to prescribers, involvement in health and community organizations and participation in professional pharmaceutical societies — these are some of the hallmarks of the professional person.

What then are the lessons of this landmark decision?

What finally counts is not what we think of ourselves and o our contributions to the health and welfare of our communities

Fancy public relations campaigns cannot change what the public sees and what the public experiences.

What ultimately counts is what the general society including the Supreme Court justices perceives as the role of the pharmacist.

If you are part of the ownership or management of any pharmacy — independent, chain or institutional — you set the policies, the tone, the quality of your pharmacy and its services. If you are a practicing pharmacist, your daily actions either confirm or refute the prevailing perception of the pharmacist as one who "no more renders a true professional service than does a clerk who sells lawbooks."

— *Nathan I. Gruz*

calendar

September 9 (Thursday) — MSHP Meeting, Johns Hopkins Hospital
September 19–23 — NARD Convention, San Francisco
November 4 (Thursday) — MPhA Simon Solomon Economics Seminar

1977

January 14–21 — MPhA Seminar and Tour — Acapulco and Mexico City
February 13 (Sunday) — BMPA Annual Banquet, Bluecrest
March 5–13 — MPhA Trip to Vail, Colorado

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650 WEST LOMBARD STREET
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Prescription Price Advertising — A Landmark Decision

Complete Text

SUPREME COURT OF THE UNITED STATES

Syllabus

VIRGINIA STATE BOARD OF PHARMACY ET AL. v. VIRGINIA CITIZENS CONSUMER COUNCIL, INC., ET AL.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA

No. 74-895. Argued November 11, 1975—Decided May 24, 1976

Appellees, as consumers of prescription drugs, brought suit against the Virginia State Board of Pharmacy and its individual members, appellants herein, challenging the validity under the First and Fourteenth Amendments of the Virginia statute declaring it unprofessional conduct for a licensed pharmacist to advertise the prices of prescription drugs. A three-judge District Court declared the statute void and enjoined appellants from enforcing it. *Held:*

1. Any First Amendment protection enjoyed by advertisers seeking to disseminate prescription drug price information is also enjoyed, and thus may be asserted, by appellees as recipients of such information. Pp. 8–9.

2. "Commercial speech" is not wholly outside the protection of the First and Fourteenth Amendments, and the Virginia statute is therefore invalid. Pp. 13–25.

(a) That the advertiser's interest in a commercial advertisement is purely economic does not disqualify him from protection under the First and Fourteenth Amendments. Both the individual consumer and society in general may have strong interests in the free flow of commercial information. Pp. 14–17.

(b) The ban on advertising prescription drug prices cannot be justified on the basis of the State's interest in maintaining the professionalism of its licensed pharmacists; the State is free to require whatever professional standards it wishes of its pharmacists, and may subsidize them or protect them from competition in other ways, but it may not do so by keeping the public in ignorance of the lawful terms that competing pharmacists are offering. Pp. 18–22.

(c) Whatever may be the bounds of time, place, and manner restrictions on commercial speech, they are plainly exceeded by the Virginia statute, which singles out speech of a particular content and seeks to prevent its dissemination completely. P. 23.

(d) No claim is made that the prohibited prescription drug advertisements are false, misleading, or propose illegal transactions, and a State may not suppress the dissemination of concededly truthful information about entirely lawful activity, fearful of that information's effect upon its disseminators and its recipients. Pp. 23–25.

373 F. Supp. 683, affirmed.

Blackmun, J., delivered the opinion of the Court, in which Burger, C. J., and Brennan, Stewart, White, Marshall, and Powell, JJ., joined. Burger, C. J., and Stewart, J., filed concurring opinions. Rehnquist, J., filed a dissenting opinion. Stevens, J., took no part in the consideration or decision of the case.

Mr. Justice Blackmun delivered the opinion of the Court.

The plaintiff-appellees in this case attack, as violative of the First and Fourteenth Amendments,[1] that portion of § 54–524.35 of Va. Code Ann. (1974), which provides that a pharmacist licensed in Virginia is guilty of unprofessional conduct if he "(3) publishes, advertises or promotes, directly or indirectly, in any manner whatsoever, any amount, price, fee, premium, discount, rebate or credit terms . . . for any drugs which may be dispensed only by prescription."[2] The three-judge District Court declared the quoted portion of the statute "void and of no effect," Juris. Statement App. 1, and enjoined the defendant-appellants, the Virginia State Board of Pharmacy and the individual members of that Board, from enforcing it. 373 F. Supp. 683 (ED Va. 1974). We noted probable jurisdiction of the appeal. 420 U. S. 971 (1975).

> *The 'practice of pharmacy' is statutorily declared to be 'a professional practice affecting the public health, safety and welfare', and to be 'subject to regulation and control in the public interest' . . . Indeed, the practice is subject to extensive regulation aimed at preserving high professional standards.*

I

Since the challenged restraint is one that peculiarly concerns the licensed pharmacist in Virginia, we begin with a description of that profession as it exists under Virginia law.

The "practice of pharmacy" is statutorily declared to be "a professional practice affecting the public health, safety and welfare," and to be "subject to regulation and control in the public interest." Va. Code Ann. § 54–524.2 (a) (1974).[3] Indeed, the practice is subject to extensive regulation aimed at preserving high professional standards. The regulatory body is the appellant Virginia State Board of Pharmacy. The Board is broadly charged by statute with various responsibilities, including the "[m]aintenance of the quality, quantity, integrity, safety and efficacy of drugs or devices distributed, dispensed or administered." § 54–524.16 (a). It also is to concern itself with "[m]aintaining the integrity of,

(Continued on Page 8

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FOR PEACE OF MIND:

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and public confidence in, the profession and improving the delivery of quality pharmaceutical services to the citizens of Virginia." § 54–524.16 (d). The Board is empowered to "make such bylaws, rules and regulations . . . as may be necessary for the lawful exercise of its powers." § 54–524.17.

The appellants contend that the advertisement of prescription drug prices is outside the protection of the First Amendment because it is 'commercial speech.'

The Board is also the licensing authority. It may issue a license, necessary for the practice of pharmacy in the State, only upon evidence that the applicant is "of good moral character," is a graduate in pharmacy of a school approved by the Board, and has had "a suitable period of experience [not to exceed 12 months] acceptable to the Board." § 54–524.21. The applicant must pass the examination prescribed by the Board. *Ibid.* One approved school is the School of Pharmacy of the Medical College of Virginia, where the curriculum is for three years following two years of college. Prescribed prepharmacy courses, such as biology and chemistry, are to be taken in college, and study requirements at the school itself include courses in organic chemistry, biochemistry, comparative anatomy, physiology, and pharmacology. Students are also trained in the ethics of the profession, and there is some clinical experience in the school's hospital pharmacies and in the medical center operated by the Medical College. This is "a rigid, demanding curriculum in terms of what the pharmacy student is expected to know about drugs."[4]

Once licensed, a pharmacist is subject to a civil monetary penalty, or to revocation or suspension of his license, if the Board finds that he "is not of good character," or has violated any of a number of stated professional standards (among them that he not be "negligent in the practice of pharmacy" or have engaged in "fraud or deceit upon the consumer . . . in connection with the practice of pharmacy"), or is guilty of "unprofessional conduct." Va. Code Ann. § 54–524.22:1. "Unprofessional conduct" is specifically defined in § 54–524.35, n. 2, *supra*, the third numbered phrase of which relates to advertising of the price for any prescription drug, and is the subject of this litigation.

Inasmuch as only a licensed pharmacist may dispense prescription drugs in Virginia, § 54–524.48,[5] advertising or other affirmative dissemination of prescription drug price information is effectively forbidden in the State. Some pharmacies refuse even to quote prescription drug prices over the telephone. The Board's position, however, is that this would not constitute an unprofessional publication.[6] It is clear, nonetheless, that all advertising of such prices, in the normal sense, is forbidden. The prohibition does not extend to nonprescription drugs, but neither is it confined to prescriptions that the pharmacist compounds himself. Indeed, about 95% of all prescriptions now are filled with dosage forms prepared by the pharmaceutical manufacturer.[7]

II

This is not the first challenge to the constitutionality of § 54–524.35 and what is now its third numbered phrase. Shortly after the phrase was added to the statute in 1968,[8] a suit seeking to enjoin its operation was instituted by a drug retailing company and one of its pharmacists. Although the First Amendment was invoked, the challenge appears to have been based primarily on the Due Process and Equal Protection Clauses of the Fourteenth Amendment. In any event, the prohibition on drug price advertising was upheld. *Patterson Drug Co.* v. *Kingery,* 305 F. Supp. 821 (WD Va. 1969). The three-judge court did find that the dispensation of prescription drugs "affects the public health, safety and welfare." *Id.,* at 824–825. No appeal was taken.

[In 1969 a] three judge court did find that the dispensation of prescription drugs 'affects the public health, safety and welfare.'

The present, and second, attack on the statute is one made not by one directly subject to its prohibition, that is, a pharmacist, but by prescription drug consumers who claim that they would greatly benefit if the prohibition were lifted and advertising freely allowed. The plaintiffs are an individual Virginia resident who suffers from diseases that require her to take prescription drugs on a daily basis,[9] and two nonprofit organizations.[10] Their claim is that the First Amendment entitles the user of prescription drugs to receive information, that pharmacists wish to communicate to them through advertising and other promotional means, concerning the prices of such drugs.

Certainly that information may be of value. Drug prices in Virginia, for both prescription and nonprescription items, strikingly vary from outlet to outlet even within the same locality. It is stipulated, for example, that in Richmond "the cost of 40 Achromycin tablets ranges from $2.59 to $6.00, a difference of 140% [*sic*]," and that in the Newport News-Hampton area the cost of tetracycline ranges from $1.20 to $9.00, a difference of 650%.[11]

The District Court seized on the identity of the plaintiff-appellees as consumers as a feature distinguishing the present case from *Patterson Drug Co.* v. *Kingery, supra.* Because the unsuccessful plaintiffs in that earlier case were pharmacists, the court said, "theirs was a prima

(Continued on Page 11

Bronchodilator tablets

BRETHINE™
terbutaline sulfate

Highly effective oral bronchodilator.

Minimal cardiac effect.

Side effects are generally transient.

Effectiveness lasts from four to eight hours.

Effective for long-term treatment.

Only three tablets a day.

Please see full prescribing information on the back of this page.

Brethine™ Tablets

terbutaline sulfate

Geigy

An oral bronchodilator for patients with bronchial asthma and reversible bronchospasm associated with bronchitis and emphysema.

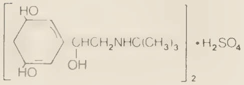
Brethine™

brand of terbutaline sulfate

Tablets of 5 mg.

Prescribing Information

Description Brethine, brand of terbutaline sulfate, a synthetic sympathomimetic amine, may be chemically described as α-[(*tert*-butylamino) methyl]-3,5-dihydroxybenzyl alcohol sulfate. The structural formula is as follows:



Brethine, brand of terbutaline sulfate, is a water soluble, colorless, crystalline solid. Tablets containing Brethine, brand of terbutaline sulfate, should be stored at controlled room temperature.

Each scored, white tablet contains 5 mg. (equivalent to 4.1 mg. of free base) of Brethine, brand of terbutaline sulfate.

Actions Brethine, brand of terbutaline sulfate, is a β-adrenergic receptor agonist which has been shown by *in vitro* and *in vivo* pharmacological studies in animals to exert a preferential effect on β_2 adrenergic receptors such as those located in bronchial smooth muscle. Controlled clinical studies in patients who were administered the drug orally have revealed proportionally greater changes in pulmonary function parameters than in heart rate or blood pressure. While this *suggests* a relative preference for the β_2 receptor in man, the usual cardiovascular effects commonly associated with sympathomimetic agents were also observed with Brethine, brand of terbutaline sulfate

Brethine, brand of terbutaline sulfate, has been shown in controlled clinical studies to relieve bronchospasm in chronic obstructive pulmonary disease

This action is manifested by a clinically significant increase in pulmonary function as demonstrated by an increase of 15% or more in FEV_1 and in $FEF_{25\text{-}75\%}$. Following administration of Brethine, brand of terbutaline sulfate, tablets, a measurable change in flow rate is usually observed in 30 minutes, and a clinically significant improvement in pulmonary function occurs at 60-120 minutes. The maximum effect usually occurs within 120-180 minutes. Brethine, brand of terbutaline sulfate, also produces a clinically significant decrease in airway and pulmonary resistance which persists for at least four hours or longer. Significant bronchodilator action, as measured by various pulmonary function determinations (airway resistance, $FEF_{25\text{-}75\%}$, or PEFR), has been demonstrated in some studies for periods up to eight hours.

Clinical studies were conducted in which the effectiveness of Brethine, brand of terbutaline sulfate, was evaluated in comparison with ephedrine over periods up to three months. Both drugs continued to produce significant improvement in pulmonary function throughout this period of treatment.

Indications Brethine, brand of terbutaline sulfate, is indicated as a bronchodilator for bronchial asthma and for reversible bronchospasm which may occur in association with bronchitis and emphysema.

Contraindications Brethine, brand of terbutaline sulfate, is contraindicated when there is known hypersensitivity to sympathomimetic amines.

Warnings *Usage in Pregnancy:* Animal reproductive studies have been negative with respect to adverse effects on fetal development. The safe use of Brethine, brand of terbutaline sulfate, has not, however, been established in human pregnancy. As with any medication, the use of the drug in pregnancy, lactation, or women of childbearing potential requires that the expected therapeutic benefit of the drug be weighed against its possible hazards to the mother or child.

Usage in Pediatrics: Brethine, brand of terbutaline sulfate, tablets are not presently recommended for children below the age of 12 years due to insufficient clinical data in this pediatric group.

Precautions Brethine, brand of terbutaline sulfate, should be used with caution in patients with diabetes, hypertension, and hyperthyroidism.

As with other sympathomimetic bronchodilator agents, Brethine, brand of terbutaline sulfate, should be administered cautiously to cardiac patients, especially those with associated arrhythmias

The concomitant use of Brethine, brand of terbutaline sulfate, with other sympathomimetic agents is not recommended, since their combined effect on the cardiovascular system may be deleterious to the patient. However, this does not preclude the use of an aerosol bronchodilator of the adrenergic stimulant type for the relief of an acute bronchospasm in patients receiving chronic oral Brethine, brand of terbutaline sulfate, therapy.

Adverse Reactions Commonly observed side effects include nervousness and tremor. Other reported reactions include headache, increased heart rate, palpitations, drowsiness, nausea, vomiting, and sweating. These reactions are generally transient in nature and usually do not require treatment. The frequency of these side effects appears to diminish with continued therapy. In general, all the side effects observed are characteristic of those commonly seen with sympathomimetic amines.

Dosage and Administration The usual oral dose of Brethine, brand of terbutaline sulfate, for adults is 5 mg. administered at approximately six-hour intervals, three times daily, during the hours the patient is usually awake. If side effects are particularly disturbing, the dose may be reduced to 2.5 mg., three times daily, and still provide a clinically significant improvement in pulmonary function. A dose of 2.5 mg., three times daily, also is recommended for children in the 12- to 15-year group. Brethine, brand of terbutaline sulfate, is not recommended at present for use in children below the age of 12 years. In adults, a total dose of 15 mg. should not be exceeded in a 24-hour period. In children, a total dose of 7.5 mg. should not be exceeded in a 24-hour period.

How Supplied Brethine, brand of terbutaline sulfate, tablets of 5 mg. are supplied in bottles of 100. 98-146-060-B (5/75) 667001

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Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BR 11331

facie commercial approach," 373 F. Supp., at 686. The present plaintiffs, on the other hand, were asserting an interest in their own health that was "fundamentally deeper than a trade consideration." *Ibid.* In the District Court's view, the expression in *Valentine* v. *Chrestensen,* 316 U. S. 52, 54–55 (1942), to the effect that "purely commercial advertising" is not protected had been tempered, by later decisions of this Court, to the point that First Amendment interests in the free flow of price information could be found to outweigh the countervailing interests of the State. The strength of the interest in the free flow of drug price information was borne out, the court felt, by the fact that three States by court decision had struck down their prohibitions on drug price advertising. *Florida Board of Pharmacy* v. *Webb's City, Inc.,* 219 So. 2d 681 (Fla. 1969); *Maryland Board of Pharmacy* v. *Sav-A-Lot, Inc.,* 270 Md. 103; 311 A. 2d 242 (1973); *Pennsylvania State Board of Pharmacy* v. *Pastor,* 441 Pa. 186, 272 A. 2d 487 (1971).[12] The District Court recognized that this Court had upheld—against federal constitutional challenges other than on First Amendment grounds—state restrictions on the advertisement of prices for optometrists' services, *Head* v. *New Mexico Board,* 374 U. S. 424 (1963), for eyeglass frames, *Williamson* v. *Lee Optical Co.,* 348 U. S. 483 (1955), and for dentists' services, *Semler* v. *Dental Examiners,* 294 U. S. 608 (1935).[13] The same dangers of abuse and deception were not thought to be present, however, when the advertised commodity was prescribed by a physician for his individual patient and was dispensed by a licensed pharmacist. The Board failed to justify the statute adequately, and it had to fall. 373 F. Supp., at 686–687.

Because the unsuccessful plaintiffs in that earlier case were pharmacists, the court said 'theirs was a prima facie commercial approach' . . . The present plaintiffs, on the other hand, were asserting an interest in their own health that was 'fundamentally deeper than a trade consideration.'

III

The question first arises whether, even assuming that First Amendment protection attaches to the flow of drug price information, it is a protection enjoyed by the appellees as recipients of the information, and not solely, if at all, by the advertisers themselves who seek to disseminate that information.

Freedom of speech presupposes a willing speaker. But where a speaker exists, as is the case here,[14] the protection afforded is to the communication, to its source and to its recipients both. This is clear from the decided cases. In *Lamont* v. *Postmaster General,* 381 U. S. 301 (1965), the Court upheld the First Amendment rights of citizens to receive political publications sent from abroad. More recently, in *Kleindienst* v. *Mandel,* 408 U. S. 753, 762–763 (1972), we acknowledged that this Court has referred to a First Amendment right to "receive information and ideas," and that freedom of speech " 'necessarily protects the right to receive.' " And in *Procunier* v. *Martinez,* 416 U. S. 396, 408–409 (1974), where censorship of prison inmates' mail was under examination, we thought it unnecessary to assess the First Amendment rights of the inmates themselves, for it was reasoned that such censorship equally infringed the rights of noninmates to whom the correspondence was addressed. There are numerous other expressions to the same effect in the Court's decisions. See, *e. g., Red Lion Broadcasting Co.* v. *FCC,* 395 U. S. 367, 390 (1969); *Stanley* v. *Georgia,* 394 U. S. 557, 564 (1969); *Griswold* v. *Connecticut,* 381 U. S. 479, 482 (1965); *Marsh* v. *Alabama,* 326 U. S. 501, 505 (1946); *Thomas* v. *Collins,* 323 U. S. 516, 534 (1945); *Martin* v. *Struthers,* 319 U. S. 141, 143 (1943). If there is a right to advertise, there is a reciprocal right to receive the advertising, and it may be asserted by these appellees.[15]

The strength of the interest in the free flow of drug price information was borne out, the court felt, by the fact that three States by court decision had struck down their prohibitions on drug price advertising.

IV

The appellants contend that the advertisement of prescription drug prices is outside the protection of the First Amendment because it is "commercial speech." There can be no question that in past decisions the Court has given some indication that commercial speech is unprotected. In *Valentine* v. *Chrestensen, supra,* the Court upheld a New York statute that prohibited the distribution of any "handbill, circular . . . or other advertising matter whatsoever in or upon any street." The Court concluded that, although the First Amendment would forbid the banning of all communication by handbill in the public thoroughfares, it imposed "no such restraint on government as respects purely commercial advertising." 316 U. S., at 54. Further support for a "commercial speech" exception to the First Amendment may perhaps be found in *Breard* v. *Alexandria,* 341 U. S. 622 (1951), where the Court upheld a conviction for violation of an ordinance prohibiting door-to-door solicitation of magazine subscriptions. The Court reasoned: "The selling . . . brings into the transaction a commercial feature," and it distinguished *Martin* v. *Struthers, supra,* where it had reversed a conviction for door-to-door distribution of leaflets publicizing a religious meeting, as a case involving "no element of the commercial." 341 U. S., at 642–643. Moreover, the Court several times has stressed that communications to which First Amendment protection was given were *not* "purely commercial." *New York Times Co.* v. *Sullivan,* 376 U. S. 254, 266 (1964); *Thomas* v. *Collins,* 323 U. S., at 533; *Murdock* v. *Pennsylvania,* 319 U. S. 105, 111 (1943); *Jamison* v. *Texas,* 318 U. S. 413, 417 (1943).

The 'idea' the pharmacist wishes to communicate is simply this: 'I will sell you the X prescription at the Y price.' Our question, then, is whether this communication is wholly outside the protection of the First Amendment.

Since the decision in *Breard,* however, the Court has never *denied* protection on the ground that the speech in issue was "commercial speech." That simplistic approach, which by then had come under criticism or was regarded as of doubtful validity by members of the Court,[16] was avoided in *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations,* 413 U. S. 376 (1973). There the Court upheld an ordinance prohibiting newspapers from listing employment advertisements in columns according to whether male or female employees were sought to be hired. The Court, to be sure, characterized the advertisements as "classic examples of commercial speech," *id.,* at 385, and a newspaper's printing of the advertisements as of the same character. The Court, however, upheld the ordinance on the ground that the restriction it imposed was permissible because the discriminatory hirings proposed by the advertisements, and by their newspaper layout, were themselves illegal.

Last Term, in *Bigelow* v. *Virginia,* 421 U. S. 809 (1975), the notion of unprotected "commercial speech" all but passed from the scene. We reversed a conviction for violation of a Virginia statute that made the circulation of any publication to encourage or promote the processing of an abortion in Virginia a misdemeanor. The defendant had published in his newspaper the availability of abortions in New York. The advertisement in question, in addition to announcing that abortions were legal in New York, offered the services of a referral agency in that State. We rejected the contention that the publication was unprotected because it was commercial. *Chrestensen's* continued validity was questioned, and its holding was described as "distinctly a limited one" that merely upheld "a reasonable regulation of the manner in which commercial advertising could be distributed." 421 U. S., at 819. We concluded that "the Virginia courts erred in their assumptions that advertising, as such, was entitled to no First Amendment protection," and we observed that the "relationship of speech to the marketplace of products or of services does not make it valueless in the marketplace of ideas." *Id.,* at 825–826.

Some fragment of hope for the continuing validity of a "commercial speech" exception arguably might have persisted because of the subject matter of the advertisement in *Bigelow.* We noted that in announcing the availability of legal abortions in New York, the advertisement "did more than simply propose a commercial transaction. It contained factual material of clear 'public interest.'" *Id.,* at 822. And, of course, the advertisement related to activity with which, at least in some respects, the State could not interfere. See *Roe* v. *Wade,* 410 U. S. 113 (1973); *Doe* v. *Bolton,* 410 U. S. 179 (1973). Indeed, we observed: "We need not decide in this case the precise extent to which the First Amendment permits regulation of advertising that is related to activities the State may legitimately regulate or even prohibit." *Id.,* at 825.

Here, in contrast, the question whether there is a First Amendment exception for "commercial speech" is squarely before us. Our pharmacist does not wish to editorialize on any subject, cultural, philosophical, or political. He does not wish to report any particularly newsworthy fact, or to make generalized observations even about commercial matters. The "idea" he wishes to communicate is simply this: "I will sell you the X prescription drug at the Y price." Our question, then, is whether this communication is wholly outside the protection of the First Amendment.

V

We begin with several propositions that already are settled or beyond serious dispute. It is clear, for example, that speech does not lose its First Amendment protection because money is spent to project it, as in a paid advertisement of one form or another. *Buckley* v. *Valeo,* — U. S. — (1976); *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations,* 413 U. S., at 384; *New York Times Co.* v. *Sullivan,* 376 U. S., at 266. Speech likewise is protected even though it is carried in a form that is "sold" for profit, *Smith* v. *California,* 361 U. S. 141, 150 (1959) (books); *Joseph Burstyn, Inc.* v. *Wilson,* 343 U. S. 495, 501 (1952) (motion pictures); *Murdock* v. *Pennsylvania,* 319 U. S., at 111 (religious literature), and even though it may involve a solicitation to purchase or otherwise pay or contribute money. *New York Times Co.* v. *Sullivan, supra; NAACP* v. *Button,* 371 U. S. 415, 429 (1963); *Jamison* v. *Texas,* 318 U. S., at 417; *Cantwell* v. *Connecticut,* 310 U. S. 296, 306–307 (1940).

If there is a kind of commercial speech that lacks all First Amendment protection, therefore, it must be distinguished by its content. Yet the speech whose content deprives it of protection cannot simply be speech on a commercial subject. No one would contend that our pharmacist may be prevented from being heard on the subject of whether, in general, pharmaceutical prices should be regulated, or their advertisement forbidden. Nor can it be dispositive that a commercial advertisement is uneditorial, and merely reports a fact. Purely factual matter of public interest may claim protection. *Bigelow* v. *Virginia*, 412 U. S., at 822; *Thornhill* v. *Alabama*, 310 U. S. 88, 102 (1940).

Our question is whether speech which does "no more than propose a commercial transaction," *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations*, 413 U. S., at 385, is so removed from any "exposition of ideas," *Chaplinsky* v. *New Hampshire*, 315 U. S. 568, 572 (1942), and from " 'truth, science, morality, and arts in general, in its diffusion of liberal sentiments on the administration of Government.' " *Roth* v. *United States*, 354 U. S. 476, 484 (1957), that it lacks all protection. Our answer is that it is not.

Focusing first on the individual parties to the transaction that is proposed in the commercial advertisement, we may assume that the advertiser's interest is a purely economic one. That hardly disqualifies him for protection under the First Amendment. The interests of the contestants in a labor dispute are primarily economic, but it has long been settled that both the employee and the employer are protected by the First Amendment when they express themselves on the merits of the dispute in order to influence its outcome. See, *e. g., NLRB* v. *Gissel Packing Co.*, 395 U. S. 575, 617–618 (1969); *NLRB* v. *Virginia Electric & Power Co.*, 314 U. S. 469, 477 (1941); *AFL* v. *Swing*, 312 U. S. 321, 325–326 (1941); *Thornhill* v. *Alabama*, 310 U. S., at 102. We know of no require-

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Those whom the suppression of prescription drug price information hits the hardest are the poor, the sick, and particularly the aged. A disproportionate amount of their income tends to be spent on prescription drugs; yet they are the least able to learn, by shopping from pharmacist to pharmacist, where their scarce dollars are best spent. When drug prices vary as strikingly as they do, information as to who is charging what becomes more than a convenience . . . It could mean the alleviation of physical pain or the enjoyment of basic necessities.

IMPROVE!!!

YOUR PROFIT — YOUR SALES — YOUR TURNOVER

with

CALVERT'S
PROVEN PROGRAMS

ASTRO = CO-OP AD PROGRAM
CAL-SAV = POINT OF PURCHASE PROGRAM
A.P.P. = ACCUMULATIVE PURCHASES PROGRAM
D.P.P. = DIRECT PURCHASE PROGRAM
W.S.P. = WEEKLY SPECIALS PROGRAM
and
C.P.P. = CONTROLLED PERCENTAGE PROGRAM

PHONE: (301) 467-2780

THE CALVERT DRUG COMPANY
901 CURTAIN AVENUE
BALTIMORE, MARYLAND 21218

ment that, in order to avail themselves of First Amendment protection, the parties to a labor dispute need address themselves to the merits of unionism in general or to any subject beyond their immediate dispute.[17] It was observed in *Thornhill* that "the practices in a single factory may have economic repercussions upon a whole region and affect widespread systems of marketing." *Id.*, at 103. Since the fate of such a "single factory" could as well turn on its ability to advertise its product as on the resolution of its labor difficulties, we see no satisfactory distinction between the two kinds of speech.

As to the particular consumer's interest in the free flow of commercial information, that interest may be as keen, if not keener by far, than his interest in the day's most urgent political debate. Appellees' case in this respect is a convincing one. Those whom the suppression of prescription drug price information hits the hardest are the poor, the sick, and particularly the aged. A disproportionate amount of their income tends to be spent on prescription drugs; yet they are the least able to learn, by shopping from pharmacist to pharmacist, where their scarce dollars are best spent.[18] When drug prices vary as strikingly as they do, information as to who is charging what becomes more than a convenience. It could mean the alleviation of physical pain or the enjoyment of basic necessities.

> *We have returned to the original constitutional proposition that courts do not substitute their social and economic beliefs for the judgment of legislative bodies who are elected to pass law.*

Generalizing, society also may have a strong interest in the free flow of commercial information. Even an individual advertisement, though entirely "commercial," may be of general public interest. The facts of decided cases furnish illustrations: advertisements stating that referral services for legal abortions are available, *Bigelow* v. *Virginia, supra;* that a manufacturer of artificial furs promotes his product as an alternative to the extinction by his competitors of fur-bearing mammals, see *Fur Information & Fashion Council, Inc.* v. *E. F. Timme & Son*, 364 F. Supp. 16 (SDNY 1973); and that a domestic producer advertises his product as an alternative to imports that tend to deprive American residents of their jobs, cf. *Chicago Joint Board* v. *Chicago Tribune Co.*, 435 F. 2d 470 (CA7 1970), cert. denied, 402 U. S. 973 (1971). Obviously, not all commercial messages contain the same or even a very great public interest element. There are few to which such an element, however, could not be added. Our pharmacist, for example, could cast himself as a commentator on store-to-store disparities in drug prices, giving his own and those of a competitor as proof. We see little point in requiring him to do so, and little difference if he does not.

Moreover, there is another consideration that suggests that no line between publicly "interesting" or "important" commercial advertising and the opposite kind could ever be drawn. Advertising, however tasteless and excessive it sometimes may seem, is nonetheless dissemination of information as to who is producing and selling what product, for what reason, and at what price. So long as we preserve a predominantly free enterprise economy, the allocation of our resources in large measure will be made through numerous private economic decisions. It is a matter of public interest that those decisions, in the aggregate, be intelligent and well informed. To this end, the free flow of commercial information is indispensable. See *Dun & Bradstreet, Inc.* v. *Grove*, 404 U. S. 898, 904–906 (1971) (Douglas, J., dissenting from denial of certiorari). See also *FTC* v. *Proctor & Gamble Co.*, 386 U. S. 568, 603–604 (1967) (Harlan, J., concurring). And if it is indispensable to the proper allocation of resources in a free enterprise system, it is also indispensable to the formation of intelligent opinions as to how that system ought to be regulated or altered. Therefore, even if the First Amendment were thought to be primarily an instrument to enlighten public decisionmaking in a democracy,[19] we could not say that the free flow of information does not serve that goal.[20]

> *The same dangers of abuse and deception were not thought to be present, however, when the advertised commodity was prescribed by a physician for his individual patient and was dispensed by a licensed pharmacist. The Board failed to justify the statute adequately, and it had to fall.*

Arrayed against these substantial individual and societal interests are a number of justifications for the advertising ban. These have to do principally with maintaining a high degree of professionalism on the part of licensed pharmacists.

Arrayed against these substantial individual and societal interests are a number of justifications for the advertising ban. These have to do principally with maintaining a high degree of professionalism on the part of licensed pharmacists.[21] Indisputably, the State has a strong interest in maintaining that professionalism. It is exercised in a number of ways for the consumer's

(Continued on Page 16)

You can't beat cheap labor.

Introducing Datarex,® a remarkable new inventory management system specifically designed to get you out of the day-to-day problems of inventory control. It not only does a lot of your work cheaper than you can do it yourself, it probably does it better.

Take price stickers. You may be losing 2% or more of your bottom-line profits now because your stickers are out of date. Datarex® keeps you up to the minute—automatically.

You're probably losing 15% of your possible sales because of outs. Datarex® shelf labels and the Datarex® in-store computer put an end to outs—again, automatically. (The computer, by the way, can transmit most orders in less than a minute.)

You probably don't have time right now to analyze your profits item-by-item. Datarex® management reports can give you an in-depth analysis of volume and profits for every department every month. And every quarter you get all the same information *for every item you sell.*

And talk about cheap labor: a Datarex® system can cost as little as $50 a month. And it will be completely tailored to your exact specifications, so you won't have to pay a penny for any service you don't need. What's more, it can be operated by anybody you have working for you. There's no need for expensive skilled labor.

And keep this in mind, Datarex® has the ability to drastically reduce lost sales, thus maximizing your return on your investment.

How can we do it at this price? We figure we've got to. We're a full-service wholesaler and we want all your business. *All of it.* We can't afford to charge you too much for a single item or service.

ANACIN
BAYER

So call your Gilpin wholesaler today. Just tell him you want out of inventory and into management, where you belong. Tell him you want to know more about Datarex.®

You can't beat the system: The Datarex® System from Gilpin.

THE HENRY B.
GILPIN
COMPANY
901 Southern Avenue
Washington, D.C. 20032
Phone (301) 630-4500

Attention Harrison L. Leach
Vice President Retailer Services
I want to know more about the system. Send me your free Datarex® booklet.

Name
Firm
Address
City State Zip

benefit. There is the clinical skill involved in the compounding of drugs, although, as has been noted, these now make up only a small percentage of the prescriptions filled. Yet, even with respect to manufacturer-prepared compounds, there is room for the pharmacist to serve his customer well or badly. Drugs kept too long on the shelf may lose their efficacy or become adulterated. They can be packaged for the user in such a way that the same results occur. The expertise of the pharmacist may supplement that of the prescribing physician, if the latter has not specified the amount to be dispensed or the directions that are to appear on the label. The pharmacist, a specialist in the potencies and dangers of drugs, may even be consulted by the physician as to what to prescribe. He may know of a particular antagonism between the prescribed drug and another that the customer is or might be taking, or with an allergy the customer may suffer. The pharmacist himself may have supplied the other drug or treated the allergy. Some pharmacists, concededly not a large number, "monitor" the health problems and drug consumptions of customers who come to them repeatedly.[22] A pharmacist who has a continuous relationship with his customer is in the best position, of course, to exert professional skill for the customer's protection.

The expertise of the pharmacist may supplement that of the prescribing physician. . . . The pharmacist, a specialist in the potencies and dangers of drugs, may even be consulted by the physician . . .

Price advertising, it is argued, will place in jeopardy the pharmacist's expertise and, with it, the customer's health. It is claimed that the aggressive price competition that will result from unlimited advertising will make it impossible for the pharmacist to supply professional services in the compounding, handling, and dispensing of prescription drugs. Such services are time-consuming and expensive; if competitors who economize by eliminating them are permitted to advertise their resulting lower prices, the more painstaking and conscientious pharmacist will be forced either to follow suit or to go out of business. It is also claimed that prices might not necessarily fall as a result of advertising. If one pharmacist advertises, others must, and the resulting expense will inflate the cost of drugs. It is further claimed that advertising will lead people to shop for their prescription drugs among the various pharmacists who offer the low-

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Turns snapshots into personalized picture postcards and greeting cards. Encourages customers to order extra prints — those to mail, those to keep.

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You get both of these tremendous profit-boosting features FREE when you're a District Photo Dealer. We're the company that's first with the best new developments in photo-finishing — Big Shot Borderless Photoprints, Bonus Photo, Silk-Finish, and One-Day Service.

We believe in firsts, because they keep you first in sales.

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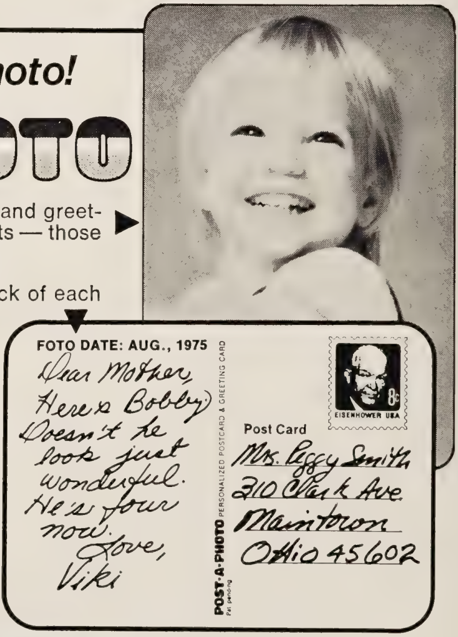


FOTO DATE: AUG., 1975

Dear Mother,
Here's Bobby.
Doesn't he
look just
wonderful.
He's four
now.
Love,
Viki

Post Card

Mrs. Peggy Smith
310 Clark Ave.
Maintown
Ohio 45602

POST·A·PHOTO PERSONALIZED POSTCARD & GREETING CARD
Pat. pending
8¢
EISENHOWER USA

DISTRICT PHOTO INC
10619 BALTIMORE AVENUE, BELTSVILLE, MARYLAND 20705

est prices, and the loss of stable pharmacist-customer relationships will make individual attention—and certainly the practice of monitoring—impossible. Finally, it is argued that damage will be done to the professional image of the pharmacist. This image, that of a skilled and specialized craftsman, attracts talent to the profession and reinforces the better habits of those who are in it. Price advertising, it is said, will reduce the pharmacist's status to that of a mere retailer.[23]

Price advertising, it is said, will reduce the pharmacist's status to that of a mere retailer.

The strength of these proffered justifications is greatly undermined by the fact that high professional standards, to a substantial extent, are guaranteed by the close regulation to which pharmacists in Virginia are subject. And this case concerns the retail sale by the pharmacist more than it does his professional standards. Surely, any pharmacist guilty of professional dereliction that actually endangers his customer will promptly lose his license. At the same time, we cannot discount the Board's justifications entirely. The Court regarded justifications of this type sufficient to sustain the advertising bans challenged on due process and equal protection grounds in *Head* v. *New Mexico Board, supra; Williams* v. *Lee Optical Co., supra;* and *Semler* v. *Dental Examiners, supra.*

The advertising ban does not directly affect professional standards one way or the other.

The challenge now made, however, is based on the First Amendment. This casts the Board's justifications in a different light, for on close inspection it is seen that the State's protectiveness of its citizens rests in large measure on the advantages of their being kept in ignorance. The advertising ban does not directly affect professional standards one way or the other. It affects them only through the reactions it is assumed people will have to the free flow of drug price information. There is no claim that the advertising ban in any way prevents the cutting of corners by the pharmacist who is so inclined. That pharmacist is likely to cut corners in any event. The only effect the advertising ban has on him is to insulate him from price competition and to open the way for him to make a substantial, and perhaps even excessive, profit in addition to providing an inferior service. The more painstaking pharmacist is also protected but, again, it is a protection based in large part on public ignorance.

The only effect the advertising ban has on him (the pharmacist) is to insulate him from price competition and to open the way for him to make substantial, and perhaps even excessive, profit in addition to providing inferior service.

It appears to be feared that if the pharmacist who wishes to provide low cost, and assertedly low quality, services is permitted to advertise, he will be taken up on his offer by too many unwitting customers. They will choose the low-cost, low-quality service and drive the "professional" pharmacist out of business. They will respond only to costly and excessive advertising, and end up paying the price. They will go from one pharmacist to another, following the discount, and destroy the pharmacist-customer relationship. They will lose respect for the profession because it advertises. All this is not in their best interests, and all this can be avoided if they are not permitted to know who is charging what.

There is, of course, an alternative to this highly paternalistic approach. That alternative is to assume that this information is not in itself harmful, that people will perceive their own best interests if only they are well enough informed, and that the best means to that end is to open the channels of communication rather than to close them. If they are truly open, nothing prevents the "professional" pharmacist from marketing his own assertedly superior product, and contrasting it with that of the low-cost, high-volume prescription drug retailer. But the choice among these alternative approaches is not ours to make or the Virginia General Assembly's. It is precisely this kind of choice, between the dangers of suppressing information, and the dangers of its misuse if it is freely available, that the First Amendment makes for us. Virginia is free to require whatever professional standards it wishes of its pharmacists; it may subsidize them or protect them from competition in other ways. Cf. *Parker* v. *Brown,* 317 U. S. 341 (1943). But it may not do so by keeping the public in ignorance of the entirely lawful terms that competing pharmacists are offering. In this sense, the justifications Virginia has offered for suppressing the flow of prescription drug price information, far from persuading us that the flow is not protected by the First Amendment, have re-enforced our view that it is. We so hold.

Virginia is free to require whatever professional standards it wishes of its pharmacists; it may subsidize them or protect them in other ways.

(Continued on Page 20)

Septra DS. The same reliable formulation but doubled in tablet strength, lower in cost.

For patients with recurrent urinary tract infections

Septra DS: the same Septra efficacy in recurrent cystitis, pyelitis, and pyelonephritis due to susceptible organisms

Septra DS: the same Septra spectrum—E coli, Klebsiella-Enterobacter, P mirabilis, P vulgaris, P morganii

Septra DS: the same b.i.d. dosage schedule, but one tablet instead of two

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections.

The recommended quantitative disc susceptibility method *(Federal Register 37:* 20527-20529, 1972) may be used to estimate bacterial susceptibility to Septra. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Septra therapy. "Intermediate susceptibility" also indicates that response is likely and "Resistant" that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or

New Septra® DS

Each tablet contains: 160 mg trimethoprim and 800 mg sulfamethoxazole

Double Strength tablet dosage: 1 tab b.i.d.

jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **At present, data are insufficient to recommend use in infants and children under 12.**

Precautions: Use with caution in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur (frequently dose-related). During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Septra. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia; cross-sensitivity may exist with these agents. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 Septra DS tablet or 2 Septra plain tablets or 4 teaspoonfuls (20 ml) every 12 hours for 10 to 14 days. Shake suspension well before using.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet, 2 tablets or 4 teaspoonfuls (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Septra DS (Double Strength) tablets containing 160 mg trimethoprim and 800 mg sulfamethoxazole—bottles of 60 tablets. Septra tablets containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 40, 100, 500, and 1000 tablets and strip packages of 100 individually packed tablets. Oral suspension, containing the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole in each teaspoonful (5 ml), cherry flavored—bottles of 450 ml.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

VI

In concluding that commercial speech, like other varieties, is protected, we of course do not hold that it can never be regulated in any way. Some forms of commercial speech regulation are surely permissible. We mention a few only to make clear that they are not before us and therefore are not foreclosed by this case.

They will go from one pharmacist to another, following the discount, and destroy the pharmacist-customer relationship. They will lose respect for the profession because it advertises.

There is no claim, for example, that the prohibition on prescription drug price advertising is a mere time, place, and manner restriction. We have often approved restrictions of that kind provided that they are justified without reference to the content of the regulated speech, that they serve a significant governmental interest, and that in so doing they leave open ample alternative channels for communication of the information. Compare *Grayned* v. *City of Rockford,* 408 U. S. 104, 116 (1972); *United States* v. *O'Brien,* 391 U. S. 367, 377 (1968); and *Kovacs* v. *Cooper,* 336 U. S. 77, 85–87 (1949), with *Buckley* v. *Valeo, supra; Erznoznik* v. *City of Jacksonville,* 422 U. S. 205, 209 (1975); *Cantwell* v. *Connecticut,* 310 U. S., at 304–308; and *Saia* v. *New York,* 334 U. S. 558, 562 (1948). Whatever may be the proper bounds of time, place, and manner restrictions on commercial speech, they are plainly exceeded by this Virginia statute, which singles out speech of a particular content and seeks to prevent its dissemination completely.

Whatever may be the proper bounds of time, place, and manner restrictions on commercial speech, they are plainly exceeded by this Virginia statute, which singles out speech of a particular content and seeks to prevent its dissemination completely.

Nor is there any claim that prescription drug price advertisements are forbidden because they are false or misleading in any way. Untruthful speech, commercial or otherwise, has never been protected for its own sake. *Gertz* v. *Robert Welch, Inc.,* 418 U. S. 323, 340 (1974); *Konigsberg* v. *State Bar,* 366 U. S. 36, 49 and n. 10 (1961). Obviously, much commercial speech is not provably false, or even wholly false, but only deceptive or misleading. We foresee no obstacle to a State's dealing effectively with this problem.[24] The First Amendment, as we construe it today, does not prohibit the State from insuring that the stream of commercial information flows cleanly as well as freely. See, for example, Va. Code Ann. § 18.2–216 (1975).

What is at issue is whether a State may completely suppress the dissemination of concededly truthful information about entirely lawful activity, fearful of that information's effect upon its disseminators and its recipients.

Also, there is no claim that the transactions proposed in the forbidden advertisements are themselves illegal in any way. Cf. *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations, supra; United States* v. *Hunter,* 459 F. 2d 205 (CA4), cert. denied, 409 U. S. 934 (1972). Finally, the special problems of the electronic broadcast media are likewise not in this case. Cf. *Capitol Broadcasting Co.* v. *Mitchell,* 333 F. Supp. 582 (DC 1971), aff'd *sub nom. Capitol Broadcasting Co.* v. *Acting Attorney General,* 405 U. S. 1000 (1972).

What is at issue is whether a State may completely suppress the dissemination of concededly truthful information about entirely lawful activity, fearful of that information's effect upon its disseminators and its recipients. Reserving other questions,[25] we conclude that the answer to this one is in the negative.

The judgment of the District Court is affirmed.

It is so ordered.

MR. JUSTICE STEVENS took no part in the consideration or decision of this case.

MR. CHIEF JUSTICE BURGER, concurring.

The Court notes that roughly 95% of all prescriptions are filled with dosage units already prepared by the manufacturer and sold to the pharmacy in that form. These are the drugs that have a market large enough to make their preparation profitable to the manufacturer; for the same reason, they are the drugs that it is profitable for the pharmacist to advertise. In dispensing *these* items, the pharmacist performs three tasks: he finds the correct bottle; he counts out the correct number of tablets or measures the right amount of liquid; and he accurately transfers the doctor's dosage instructions to the container. Without minimizing the potential consequences of error in performing these tasks or the importance of the other tasks a professional pharmacist performs, it is clear that in this regard he no more renders a true professional service than does a clerk who sells lawbooks.

Without minimizing the potential consequences of error in performing these tasks or the importance of other tasks a professional pharmacist performs, it is clear that in this regard he no more renders a true professional service than a clerk who sells lawbooks.

Our decision today, therefore, deals largely with the State's power to prohibit pharmacists from advertising the retail price of prepackaged drugs. As the Court notes, *ante,* at 25 n. 25, quite different factors would govern were we faced with a law regulating or even prohibiting advertising by the traditional learned professions of medicine or law. "The interest of the States in regulating lawyers is especially great since lawyers are essential to the primary governmental function of administering justice, and have historically been 'officers of the courts.' " *Goldfarb* v. *Virginia State Bar*, 421 U. S. 773, 792 (1975). See also *Cohen* v. *Hurley*, 366 U. S. 117, 123–124 (1961). We have also recognized the State's substantial interest in regulating physicians. See, *e. g., United States* v. *Oregon Medical Society*, 343 U. S. 326, 336 (1952); *Semler* v. *Oregon State Board of Dental Examiners*, 294 U. S. 608, 612 (1935). Attorneys and physicians are engaged *primarily* in providing services in which professional judgment is a large component, a matter very different from the retail sale of labeled drugs already prepared by others.

Attorneys and physicians are engaged primarily in providing services in which professional judgment is a large component, a matter very different from the retail sale of labeled drugs already prepared by others.

MR. JUSTICE STEWART aptly observes that the "difference between commercial price and product advertising . . . and ideological communication" allows the state a scope in regulating the former that would be unacceptable under the First Amendment with respect to the latter. I think it important to note also that the advertisement of professional services carries with it quite different risks than the advertisement of standard products. The Court took note of this in *Semler*, 294 U. S., at 612, in upholding a state statute prohibiting entirely certain types of advertisement by dentists:

> "The legislature was not dealing with traders in commodities, but with the vital interest of public health, and with a profession treating bodily ills and demanding different standards of conduct from those which are traditional in the competition of the market place. The community is concerned with the maintenance of professional standards which will insure not only competency in individual practitioners, but protection against those who would prey upon a public peculiarly susceptible to imposition through alluring promises of physical relief. And the community is concerned in providing safeguards not only against deception, but against practices which would tend to demoralize the profession by forcing its members into an unseemly rivalry which would enlarge the opportunities of the least scrupulous."

I doubt that we know enough about evaluating the quality of medical and legal services to know which claims of superiority are 'misleading' and which are justifiable.

I doubt that we know enough about evaluating the quality of medical and legal services to know which claims of superiority are "misleading" and which are justifiable. Nor am I sure that even advertising the price of certain professional services is not inherently misleading, since what the professional must do will vary greatly in individual cases. It is important to note that the Court wisely leaves these issues to another day.

MR. JUSTICE STEWART, concurring.

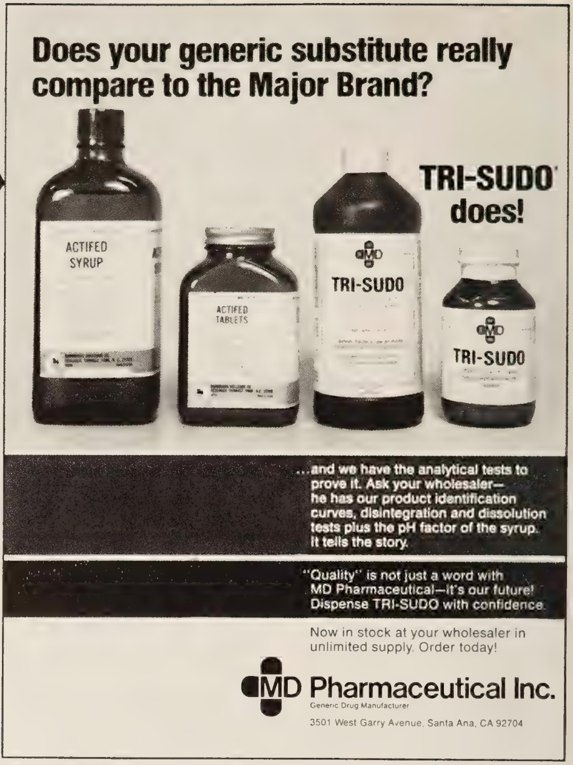
In *Thornhill* v. *Alabama,* 310 U. S. 88, the Court observed that "[f]reedom of discussion, if it would fulfill its historic function in this nation, must embrace all issues about which information is needed or appropriate to enable the members of society to cope with the exigencies of their period." *Id.,* at 102. Shortly after the *Thornhill* decision, the Court identified a single category of communications that is constitutionally unprotected: communications "which by their very utterance inflict injury." *Chaplinsky* v. *New Hampshire,* 315 U. S. 568, 572. Yet only a month after *Chaplinsky,* and without reference to that decision, the Court stated in *Valentine* v. *Chrestensen,* 316 U. S. 52, 54, that "the Constitution imposes no such restraint on government as respects purely commercial advertising." For more than 30 years this "casual, almost offhand" statement in *Valentine* has operated to exclude commercial speech from the protection afforded by the First Amendment to other types of communication. *Cammarano* v. *United States,* 358 U. S. 498, 514 (Douglas, J., concurring).[1]

But since it is a cardinal principle of the First Amendment that 'government has no power to restrict expression because of its message, its ideas, or its subject matter, or its content . . .'

(Continued on Page 23)

Dear Pharmacist: This misleading ad

provides reasons why you should continue to dispense ACTIFED®



Does your generic substitute really compare to the Major Brand?

TRI-SUDO® does!

...and we have the analytical tests to prove it. Ask your wholesaler— he has our product identification curves, disintegration and dissolution tests plus the pH factor of the syrup. It tells the story.

"Quality" is not just a word with MD Pharmaceutical—it's our future! Dispense TRI-SUDO with confidence.

Now in stock at your wholesaler in unlimited supply. Order today!

MD Pharmaceutical Inc.
Generic Drug Manufacturer
3501 West Garry Avenue, Santa Ana, CA 92704

Some hard facts from the makers of ACTIFED®

TRI-SUDO® **CLAIM:** TRI-SUDO® Syrup is a comparable generic substitute for ACTIFED®.

FACT: B.W. Co. Quality Control labs analyzed TRI-SUDO® Syrup (Lot Nos. 160000 and 160150) and found it did not contain any triprolidine hydrochloride, one of the two active ingredients in ACTIFED®.

TRI-SUDO® **CLAIM:** TRI-SUDO® had the analytical tests to prove comparability.

FACT: B.W. Co. obtained from a wholesaler TRI-SUDO® literature entitled, "Technical Data Study" and found it does *not* prove comparability. The infra-red absorption spectra shown in the test results as proof of comparability do *not* show triprolidine but the solvent used in the assay procedure.

CONCLUSION:

Two lots of TRI-SUDO® syrup were examined by our Quality Control labs and were found to contain *no* triprolidine, one of the essential ingredients of our product.

You can be sure of quality controlled products when you dispense ACTIFED® Syrup and Tablets.

For brief summary of prescribing information, please see adjoining column

The decongestant/ antihistamine chosen by NASA for Apollo, Skylab and Apollo-Soyuz space missions.

ACTIFED®
Tablets and Syrup

Description: Each scored tablet contains Actidil® brand Triprolidine Hydrochloride 2.5 mg and Sudafed® brand Pseudoephedrine Hydrochloride 60 mg. Each 5 cc teaspoonful of the syrup† contains Actidil® brand Triprolidine Hydrochloride 1.25 mg and Sudafed® brand Pseudoephedrine Hydrochloride 30 mg.
†Preservatives: sodium benzoate 0.1%, methylparaben 0.1%.

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the Indications as follows:
"Probably" effective: For the symptomatic treatment of seasonal and perennial allergic rhinitis and vasomotor rhinitis.
"Lacking substantial evidence of effectiveness as a fixed combination": For the prophylaxis and treatment of the symptoms associated with the common cold.
Final classification of the less-than-effective indications requires further investigation.

Precautions: Although pseudoephedrine hydrochloride is virtually without pressor effect in normotensive patients, it should be used with caution in patients with hypertension. In addition, even though triprolidine hydrochloride has a low incidence of drowsiness, appropriate precautions should be observed.
Adverse Reactions: The great majority of patients will exhibit no side effects. However, certain patients may exhibit mild stimulation or mild sedation—no serious side effects have been noted.
Dosage and Administration:

	TABLETS		SYRUP teaspoonfuls (5 cc)	
Adults and children over 6 years of age	1	3 times a day	2	3 times a day
Children 4 months through 6 years of age	½		1	
Infants up to 4 months of age	–		½	

How Supplied:
ACTIFED® TABLETS Bottles of 100 and 1000, bottles of 30 with child resistant cap.
ACTIFED® SYRUP Bottles of 1 gallon, 1 pint, and bottles of 4 oz with child resistant cap.

Wellcome
Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Today the Court ends the anomolous situation created by *Valentine* and holds that a communication which does no more than propose a commercial transaction is not "wholly outside the protection of the First Amendment." *Ante,* at 12. But since it is a cardinal principle of the First Amendment that "government has no power to restrict expression because of its message, its ideas, its subject matter, or its content,"[2] the Court's decision calls into immediate question the constitutional legitimacy of every state and federal law regulating false or deceptive advertising. I write separately to explain why I think today's decision does not preclude such governmental regulation.

The Court has on several occasions addressed the problem posed by false statements of fact in libel cases. Those cases demonstrate that even with respect to expression at the core of the First Amendment, the Constitution does not provide absolute protection for false factual statements that cause private injury. In *Gertz* v. *Robert Welch, Inc.*, 418 U. S. 323, 340, the Court concluded that "there is no constitutional value in false statements of fact." As the Court had previously recognized in *New York Times Co.* v. *Sullivan*, 376 U. S. 254, however, factual errors are inevitable in free debate, and the imposition of liability for erroneous factual assertions can "dampen[ ] the vigor and limit[ ] the variety of public debate" by inducing "self-censorship." *Id.,* at 279. In order to provide ample "breathing space" for free expression, the Constitution places substantial limitations on the discretion of government to permit recovery for libelous communications. See *Gertz* v. *Robert Welch, Inc., supra,* at 347–349.

The advertiser's access to the truth about his product and its price substantially eliminates any danger that governmental regulation of false or misleading price or product advertising will chill accurate and nondeceptive commercial expression.

The principles recognized in the libel decisions suggest that government may take broader action to protect the public from injury produced by false or deceptive price or product advertising than from harm caused by defamation. In contrast to the press, which must often attempt to assemble the true facts from sketchy and sometimes conflicting sources under the pressure of publication deadlines, the commercial advertiser generally knows the product or service he seeks to sell and is in a position to verify the accuracy of his factual representations before he disseminates them. The advertiser's access to the truth about his product and its price substantially eliminates any danger that governmental regulation of false or misleading price or product advertising will chill accurate and nondeceptive commercial expression. There is, therefore, little need to sanction "some falsehood in order to protect speech that matters." *Gertz* v. *Robert Welch, Inc., supra,* at 341.

The scope of constitutional protection of communicative expression is not universally inelastic. In the area of labor relations, for example, the Court has recognized that "an employer's free speech right to communicate his views to his employees is firmly established and cannot be infringed by a union or the [NLRB]." *NLRB* v. *Gissel Packing Co.,* 395 U. S. 575, 617. See *NLRB* v. *Virginia Electric & Power Co.,* 314 U. S. 469. Yet, in that context, the Court has concluded that the employer's freedom to communicate his views to his employees may be restricted by the requirement that any predictions "be carefully phrased on the basis of objective fact."[3] *Id.,* at 618. In response to the contention that the "line between so-called permitted predictions and proscribed threats is too vague to stand up under traditional First Amendment analysis," the Court relied on the employer's intimate knowledge of the employer-employee relationship and his ability to "avoid coercive speech simply by avoiding conscious overstatements he has reason to believe will mislead his employees." *Id.,* at 620. Cf. *United States* v. *95 Barrels of Vinegar,* 265 U. S. 438, 443 ("It is not difficult to choose statements, designs and devices which will not deceive."). Although speech in the labor relations setting may be distinguished from commercial advertising,[4] the *Gissel Packing Co.* opinion is highly significant in the present context because it underscores the constitutional importance of the speaker's specific and unique knowledge of the relevant facts and establishes that a regulatory scheme monitoring "the impact of utterances" is not invariably inconsistent with the First Amendment.[5] See 395 U. S., at 620.

The Court's determination that commercial advertising of the kind at issue here is not 'wholly outside the protection of' the First Amendment indicates by its very phrasing that there are important differences between commercial price and product advertising, on the one hand, and ideological communication on the other.

The Court's determination that commercial advertising of the kind at issue here is not "wholly outside the protection of" the First Amendment indicates by its very phrasing that there are important differences between commercial price and product advertising, on the one hand, and ideological communication on the other. See *ante,* at 23–24, n. 24. Ideological expression, be it oral, literary, pictorial, or theatrical, is integrally related to the exposition of thought—thought that may shape our concepts of the whole universe of man. Although such expression may convey factual information relevant to social and individual decisionmaking, it is protected by the Constitution, whether or not it contains factual representations and even if it includes inaccurate assertions of fact. Indeed, disregard of the "truth" may be employed to give force to the underlying idea expressed by the speaker.[6] "Under the First Amendment there is no such thing as a false idea," and the only way that ideas can be suppressed is through "the competition of other ideas." *Gertz* v. *Robert Welch, Inc., supra,* at 339–340.

'Under the First Amendment there is no such thing as a false idea' and the only way that ideas can be suppressed is through 'the competition of other ideas.'

Commercial price and product advertising differs markedly from ideological expression because it is confined to the promotion of specific goods or services.[7] The First Amendment protects the advertisement because of the "information of potential interest and value" conveyed, *Bigelow* v. *Virginia,* 421 U. S. 809, 822, rather than because of any direct contribution to the interchange of ideas. See *ante,* at 14–17, 22.[8] Since the factual claims contained in commercial price or product advertisements relate to tangible goods or services, they may be tested empirically and corrected to reflect the truth without in any manner jeopardizing the free dissemination of thought. Indeed, the elimination of false and deceptive claims serves to promote the one facet of commercial price and product advertising that warrants First Amendment protection—its contribution to the flow of accurate and reliable information relevant to public and private decisionmaking.

MR. JUSTICE REHNQUIST, dissenting.

The logical consequences of the Court's decision in this case, a decision which elevates commercial intercourse between a seller hawking his wares and a buyer seeking to strike a bargain to the same plane as has been previously reserved for the free marketplace of ideas, are far reaching indeed. Under the Court's opinion the way will be open not only for dissemination of price information but for active promotion of prescription drugs, liquor, cigarettes and other products the use of which it has previously been thought desirable to discourage. Now, however, such promotion is protected by the First Amendment so long as it is not misleading or does not promote an illegal product or enterprise. In coming to this conclusion, the Court has overruled a legislative determination that such advertising should not be allowed and has done so on behalf of a consumer group which is not directly disadvantaged by the statute in question. This effort to reach a result which the Court obviously considers desirable is a troublesome one, for two reasons. It extends standing to raise First Amendment claims beyond the previous decisions of this Court. It also extends the protection of that Amendment to purely commercial endeavors which it most vigorous champions on this Court had thought to be beyond its pale.

Under the Court's opinion the way will be open not only for dissemination of price information but for active promotion of prescription drugs, liquor, cigarettes and other products the use of which it has previously thought desirable to discourage.

I

I do not find the question of the appellees' standing to urge the claim which the Court decides quite as easy as the Court does. The Court finds standing on the part of the consumer appellee based upon a "right to receive information." *Ante*, pp. 8–9. Yet it has been stipulated in this case that the challenged statute does not forbid anyone from receiving this information either in person or by phone. *Ante*, p. 4. The statute forbids "only publish[ing], advertis[ing] and promot[ing]" of prescription drugs.

While it may be generally true that publication of information by its source is essential to effective communication, it is surely less true, where, as here, the potential recipients of the information have, in the Court's own words, a "keen if not keener by far" interest in it than "in the day's most urgent political debate." *Ante*, p. 14. Appellees who have felt so strongly about their right to receive information as to litigate the issue in this lawsuit must also have enough residual interest in the matter to call their pharmacy and inquire.

Appellees who have felt so strongly about their right to receive information as to litigate the issue in this lawsuit must also have enough residual interest in the matter to call their pharmacy and inquire.

The statute, in addition, only forbids *pharmacists* from publishing this price information. There is no prohibition against a consumer group, such as appellees, collecting and publishing comparative price information as to various pharmacies in an area. Indeed they have done as much in their briefs in this case. Yet, though appellees could both receive and publish the information in question the Court finds that they have standing to protest that pharmacists are not allowed to advertise. Thus, contrary to the assertion of the Court, appellees are not asserting their "right to receive information" at all but rather the right of some third party to publish. In the cases relied upon by the Court, *ante*, pp. 8–9, the plaintiffs asserted their right to receive information which would not be otherwise reasonably available to them.* They did not seek to assert the right of a third party, not before the Court, to disseminate information. Here, the only group truly restricted by this statute, the pharmacists, have not even troubled to join in this litigation and may well feel that the expense and competition of advertising is not in their interest.

II

Thus the issue on the merits is not, as the Court phrases it, whether "our pharmacist" may communicate the fact that he "will sell you the X prescription drug at Y price." No pharmacist is asserting any such claim to so communicate. The issue is rather whether appellee consumers may override the legislative determination that pharmacists should not advertise even though the pharmacists themselves do not object. In deciding that they may do so, the Court necessarily adopts a rule which cannot be limited merely to dissemination of price alone, and which cannot possibly be confined to pharmacists without likewise extending to lawyers, doctors and all other professions.

The Court necessarily adopts a rule which cannot be limited merely to dissemination of price alone, and which cannot possibly be confined to pharmacists without likewise extending to lawyers, doctors, and all other professions.

The Court speaks of the consumer's interest in the free flow of commercial information, particularly in the case of the poor, the sick, and the aged. It goes on to observe that "society also may have a strong interest in the free flow of commercial information." *Ante*, p. 15. One need not disagree with either of these statements in order to feel that they should presumptively be the concern of the Virginia Legislature, which sits to balance these and other claims in the process of making laws such as the one here under attack. The Court speaks of the importance in a "predominantly free enterprise economy" of intelligent and well-informed decisions as to allocation of resources. *Ante*, p. 16. While there is again much to be said for the Court's observation as a matter of desirable public policy, there is certainly nothing in the

United States Constitution which requires the Virginia Legislature to hew to the teachings of Adam Smith in its legislative decisions regulating the pharmacy profession. *E. g., Nebbia* v. *New York,* 297 U. S. 562; *Olsen* v. *Nebraska,* 313 U. S. 236.

As Mr. Justice Black, writing for the Court, observed in *Ferguson* v. *Skrupa,* 372 U. S. 726, 730 (1963):

> "The doctrine . . . that due process authorizes courts to hold laws unconstitutional when they believe the legislature has acted unwisely has long since been discarded. We have returned to the original constitutional proposition that courts do not substitute their social and economic beliefs for the judgment of legislative bodies who are elected to pass law."

Similarly in *Williamson* v. *Lee Optical Co.,* 348 U. S. 483, 489–490 (1955), the Court, in dealing with a state prohibition against the advertisement of eyeglass frames, held that "[w]e see no constitutional reason why a State may not treat all who deal with the human eye as members of a profession who should use no merchandising methods for obtaining customers." 348 U. S., at 490.

The Court addresses itself to the valid justifications which may be found for the Virginia statute, and apparently discounts them because it feels they embody a "highly paternalistic approach." *Ante,* p. 21. It concludes that the First Amendment requires that channels of advertising communication with respect to prescription drugs must be opened, and that Virginia may not keep "the public in ignorance of the entirely lawful terms that pharmacists are offering." *Ante,* p. 21.

I cannot distinguish between the public's right to know the price of drugs and its right to know the price of title searches or physical examinations or other professional services for which standardized fees are charged.

The Court concedes that legislatures may prohibit false and misleading advertisements, and may likewise prohibit advertisements seeking to induce transactions which are themselves illegal. In a final footnote the opinion tosses a bone to the traditionalists in the legal and medical professions by suggesting that because they sell services rather than drugs the holding of this case is not automatically applicable to advertising in those professions. But if the sole limitation on permissible state proscription of advertising is that it may not be false or misleading, surely the difference between pharmacists' advertising and lawyers' and doctors' advertising can be only one of degree and not of kind. I cannot distinguish between the public's right to know the price of drugs and its right to know the price of title searches or physical examinations or other professional services for which standardized fees are charged. Nor is it apparent how the pharmacists in this case are less engaged in a regulatable profession than were the opticians in *Williamson, supra.*

. . . Our hypothetical pharmacist may now presumably advertise not only prices of prescription drugs, but may attempt to energetically promote their sale so long as he does so truthfully.

Nor will the impact of the Court's decision on existing commercial and industrial practice be limited to allowing advertising by the professions. The Court comments that in labor disputes "it has long been settled that both the employee and the employer are protected by the First Amendment when they express themselves on the merits of the dispute in order to influence its outcome." *Ante,* p. 13. But the first case cited by the Court in support of this proposition, *NLRB* v. *Gissel Packing Co.,* 395 U. S. 575, 617–618, falls a good deal short of supporting this general statement. The Court there said that "an employer is free to communicate to his employees any of his general views about unionism or any of his specific views about a particular union, so long as the communications do not contain a 'threat of reprisal or force or promise of benefit.' " 395 U. S., at 618. This carefully guarded language is scarcely a ringing endorsement of even the second class First Amendment rights which the Court has today created in commercial speech.

It is hard to see why an employer's right to publicize a promise of benefit may be prohibited by federal law, so long as the promise is neither false nor deceptive, if pharmacists' price advertising may not be prohibited by the Virginia legislature. Yet such a result would be wholly inconsistent with established labor law.

Both the Courts of Appeals and the National Labor Relations Board have not hesitated to set aside representation elections in which the employer made statements which were undoubtedly truthful but which were found to be implicitly coercive. For instance, in *NLRB* v. *Realist, Inc.,* 328 F. 2d 840 (CA7 1964), an election was set aside when the employer, in a concededly nonthreatening manner, raised the spectre of plant closings which would result from unionism. In *Oak Manufacturing Co.,* 141 N. L. R. B. 1323 (1963), the Board set aside an election where the employer stated "categorically" that the union "cannot and will not obtain any wage increase for you," and with respect to seniority said that it could "assure" the employees that the union's program "will be worse than the present system." In *Freeman Manufacturing Co.,* 148 N. L. R. B. 68 (1964), the employer sent letters to employees in which he urged that unionization might cause customers to cease buying

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WHEN
YOU BUY
GENERICS—

TAKE A LOOK AT LEDERLE STANDARD PRODUCTS:

- ☐ over 120 products at competitive prices
- ☐ products bioequivalent where current approved testing standards exist
- ☐ each batch of every product distributed is tested by Lederle Quality Control
- ☐ quantity discounts and special reorder privileges
- ☐ liberal return goods policy
- ☐ vendor product liability endorsement available
- ☐ full Lederle services
- ☐ all products dated

The expanded line-up of Standard Products is an integral part of the total Lederle line. Nothing has been sacrificed for economy.

Lederle

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

823-6

Only 1 of these 3 mammals can synthesize vitamin C

The rare giant panda is rare indeed. Fewer than six (including two in the United States) are known to exist outside of China. But the panda *can* synthesize vitamin C.

Not so Man and the rhesus monkey. Neither can synthesize this important vitamin; nor can either of them store most of the water soluble vitamins. These nutrients, therefore, should be replenished continuously to maintain normal tissue levels.

Generally, this is accomplished in our daily diet. But under conditions of illness, stress, in convalescence or following surgery, vitamin stores may be depleted or metabolic demands increased.

This is when Surbex-T may be indicated. Surbex-T restores the water soluble vitamins. Each tablet supplies 500 mg. of vitamin C plus high-potency B-Complex.*

**High Potency B-Complex*
with 500 mg. of Vitamin C**

SURBEX-T®

**Restores what the body
cannot effectively store**

*Contains no folic acid.

6063155

Pain getting you down? Insist that your physician prescribe demerol. You pay a little more than for aspirin but you get a lot more relief.

the company's product because of delays and higher prices. The Board found this to be grounds for invalidating the election. Presumably all of these holdings will require re-evaluation in the light of today's decision with a view toward allowing the employer's speech because it is now protected by the First Amendment, as expanded by this decision.

There are undoubted difficulties with an effort to draw a bright line between "commercial speech" on the one hand and "protected speech" on the other, and the Court does better to face up to these difficulties than to attempt to hide them under labels. In this case, however, the Court has unfortunately substituted for the wavering line previously thought to exist between commercial speech and protected speech a no more satisfactory line of its own—that between "truthful" commercial speech, on the one hand, and that which is "false and misleading" on the other. The difficulty with this line is not that it waivers, but on the contrary that it is simply too Procrustean to take into account the congeries of factors which I believe could, quite consistently with the First and Fourteenth Amendments, properly influence a legislative decision with respect to commercial advertising.

Can't shake the flu? Get a prescription for tetracycline from your doctor today.

The Court insists that the rule it lays down is consistent even with the view that the First Amendment is "primarily an instrument to enlighten public decisionmaking in a democracy." *Ante*, p. 16. I had understood this view to relate to public decisionmaking as to political, social, and other public issues, rather than the decision of a particular individual as to whether to purchase one or another kind of shampoo. It is undoubtedly arguable that many people in the country regard the choice of shampoo as just as important as who may be elected to local, state, or national political office, but that does not automatically bring information about competing shampoos within the protection of the First Amendment. It is one thing to say that the line between strictly ideological and political commentaries and other kinds of commentary is difficult to draw, and that the mere fact that the former may have in it an element of commercialism does not strip it of First Amendment protection. See *New York Times* v. *Sullivan*, 376 U. S. 254. But it is another thing to say that because that line is difficult to draw, we will stand at the other end of the spectrum and reject out of hand the observation of so dedicated a champion of the First Amendment as Mr. Justice Black that the protections of that Amendment do not apply to a "'merchant' who goes from door to door 'selling pots.'" *Breard* v. *City of Alexandria*, 341 U. S. 622, 650 (Black, J., dissenting).

Don't spend another sleepless night. Ask your doctor to prescribe Seconal without delay.

In the case of "our" hypothetical pharmacist, he may now presumably advertise not only the prices of prescription drugs, but may attempt to energetically promote their sale so long as he does so truthfully. Quite consistently with Virginia law requiring prescription drugs to be available only through a physician, "our" pharmacist might run any of the following representative advertisements in a local newspaper:

> "Pain getting you down? Insist that your physician prescribe demerol. You pay a little more than for aspirin, but you get a lot more relief."
>
> "Can't shake the flu? Get a prescription for tetracycline from your doctor today."
>
> "Don't spend another sleepless night. Ask your doctor to prescribe Seconal without delay."

. . . A considered legislative judgment in most States that while prescription drugs are a necessary and vital part of medical care and treatment, there are sufficient dangers attending their widespread use that they simply may not be promoted in the same manner as hair creams, deodorants, and toothpaste.

Unless the State can show that these advertisements are either actually untruthful or misleading, it presumably is not free to restrict in any way commercial efforts on the part of those who profit from the sale of prescription drugs to put them in the widest possible circulation. But such a line simply makes no allowance whatever for what appears to have been a considered legislative judgment in most States that while prescription drugs are a necessary and vital part of medical care and treatment, there are sufficient dangers attending their widespread use that they simply may not be promoted in the same manner as hair creams, deodorants, and toothpaste. The very real dangers that general advertising for such drugs might create in terms of encouraging, even though not

(Continued on Page 31)

F. A. DAVIS & SONS, INC.

Cordially Invites You

To Attend The Area's Most Complete

FALL & HOLIDAY SHOW

MARYLAND'S LARGEST SHOW FOR 1976

1. Over 100 Leading Manufacturers Represented
2. Unusual New Items, Toys, Cosmetics and Gifts
3. Many Prizes
4. Evening Buffet
5. Show Specials
6. Thousands of Profitable Products!

Place: MARTIN'S WEST — off Beltway Exit 17

Time: Sunday, August 1 .... 1 P.M. to 10 P.M.
Monday, August 2 .... 1 P.M. to 10 P.M.
Tuesday, August 3 .... 1 P.M. to 10 P.M.

sanctioning, illicit use of them by individuals for whom they have not been prescribed, or by generating patient pressure upon physicians to prescribe them, are simply not dealt with in the Court's opinion. If prescription drugs may be advertised, they may be advertised on television during family viewing time. Nothing we know about the acquisitive instincts of those who inhabit every business and profession to a greater or lesser extent gives any reason to think that such persons will not do everything they can to generate demand for these products in much the same manner and to much the same degree as demand for other commodities has been generated.

Both Congress and state legislatures have by law sharply limited the permissible dissemination of information about some commodities because of the potential harm resulting from those commodities, even though they were not thought to be sufficiently demonstrably harmful to warrant outright prohibition at their sale. Current prohibitions on television advertising of liquor and cigarettes are prominent in this category, but apparently under the Court's holding so long as the advertisements are not deceptive they may no longer be prohibited.

The very real dangers that general advertising for such drugs might create in terms of encouraging, even though not sanctioning, illicit use of them by individuals for whom they have not been prescribed, or by generating patient pressure upon physicians to prescribe them, are simply not dealt with in the Court's opinion.

This case presents a fairly typical First Amendment problem—that of balancing interests in individual free speech against public welfare determinations embodied in a legislative enactment. As the Court noted in *American Comm. Assn.* v. *Douds*, 339 U. S. 382, 399 (1950),

> "[L]egitimate attempts to protect the public, not from the remote possible effects of noxious ideologies, but from the present excesses of direct, active conduct are not presumptively bad because they interfere with and, in some of its manifestations, restrain the exercise of First Amendment rights."

Here the rights of the appellees seem to me to be marginal at best. There is no ideological content to the information which they seek and it is freely available to them—they may even publish it if they so desire. The only persons directly affected by this statute are not parties to this lawsuit. On the other hand, the societal interest against the promotion of drug use for every ill, real or imaginary, seems to me extremely strong. I do not believe that the First Amendment mandates the Court's "open door policy" toward such commercial advertising.

FOOTNOTES

[1] The First Amendment is applicable to the States through the Due Process Clause of the Fourteenth Amendment. See, *e. g.*, *Bigelow* v. *Virginia*, 421 U. S. 809, 811 (1975); *Schneider* v. *State*, 308 U. S. 147, 160 (1939).

[2] § 54-524.35 provides in full:

"Any pharmacist shall be considered guilty of unprofessional conduct who (1) is found guilty of any crime involving grave moral turpitude, or is guilty of fraud or deceit in obtaining a certificate of registration; or (2) issues, publishes, broadcasts by radio, or otherwise, or distributes or uses in any way whatsoever advertising matter in which statements are made about his professional service which have a tendency to deceive or defraud the public, contrary to the public health and welfare; or (3) publishes, advertises or promotes, directly or indirectly, in any manner whatsoever, any amount, price, fee, premium, discount, rebate or credit terms for professional services or for drugs containing narcotics or for any drugs which may be dispensed only by prescription."

[3] The parties, also, have stipulated that pharmacy "is a profession." Stipulation of Facts ¶ 11, App. 11.

[4] *Id.*, ¶ 8, App. 11. See generally *id.*, ¶¶ 6-16, App. 10-12.

[5] Exception is made for "legally qualified" practitioners of medicine, dentistry, osteopathy, chiropody, and veterinary medicine. § 54-524.53.

[6] Stipulation of Facts ¶ 25, App. 15.

[7] *Id.*, ¶ 18, App. 13.

[8] Theretofore an administrative regulation to the same effect had been outstanding. The Board, however, in 1967 was advised by the State's Attorney General's office that the regulation was unauthorized. The challenged phrase was added to the statute the following year. See *Patterson Drug Co.* v. *Kingery*, 305 F. Supp. 821, 823 n. 1 (WD Va. 1969).

[9] Stipulation of Facts ¶ 3, App. 9.

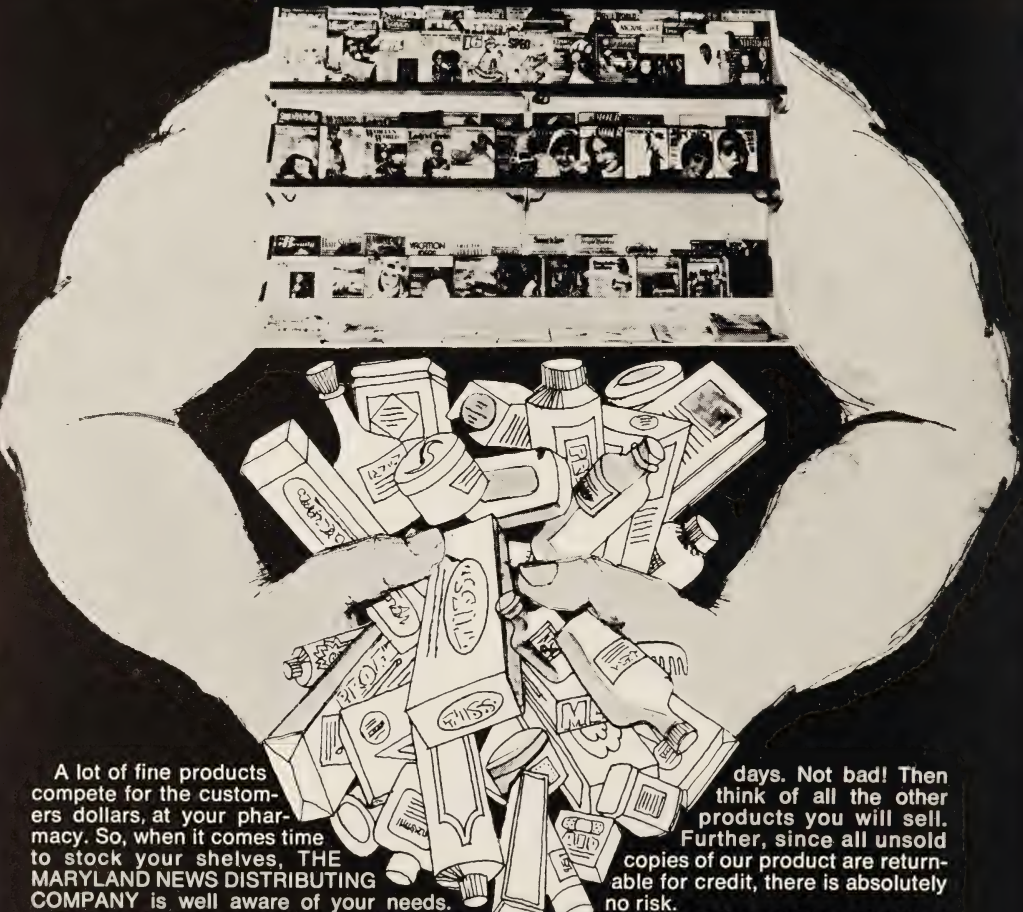
[10] The organizations are the Virginia Citizens Consumer Council, Inc., and the Virginia State AFL-CIO. Each has a substantial membership (approximately 150,000 and 69,000, respectively) many of whom are users of prescription drugs. Stipulation of Facts ¶¶ 1 and 2, App. 9. The American Association of Retired Persons and the National Retired Teachers Association, also claiming many members who "depend substantially on prescription drugs for their well-being," Brief 2, are among those who have filed briefs *amici curiae* in support of the appellees.

[11] Stipulation of Facts ¶¶ 22 (b) and (c), App. 14. The phenomenon of widely varying drug prices is apparently national in scope. The American Medical Association conducted a survey in Chicago that showed price differentials in that city of up to 1200% for the same amounts of a specific drug. A study undertaken by the Consumers Union in New York found that prices for the same amount of one drug ranged from 79¢ to $7.45, and for another from $1.25 to $11.50. *Id.*, ¶¶ 22 (d) and (e), App. 14. *Amici* American Association of Retired Persons and National Retired Teachers Association state that in 1974 they participated in a survey of prescription drug prices at 28 pharmacies in Washington, D. C., and found pharmacy-to-pharmacy variances in the price of identical drugs as great as 245%. Brief 10. The prevalence of such discrepancies "throughout the United States" is documented in a recent report. Staff Report to the Federal Trade Commission, Prescription Drug Price Disclosures 119 (1975). The same report indicates that 34 States impose significant restrictions on dissemination of drug price information and, thus, make the problem a national one. *Id.*, at 34.

[12] The Florida and Pennsylvania decisions appear to rest on state constitutional grounds. The Maryland decision was based on the Due Process Clause of the Fourteenth Amendment as well as on provisions of the state constitution.

(Continued on Page 33)

Help Yourshelf...



A lot of fine products compete for the customers dollars, at your pharmacy. So, when it comes time to stock your shelves, THE MARYLAND NEWS DISTRIBUTING COMPANY is well aware of your needs.

Our product is periodicals — magazines and paperback books — and we continually supply your racks with a variety of current reading material appealing to every taste and keeping your customer reader interest at its highest.

We understand that turnover is important. With periodicals you have a sufficient *new* product each month to stimulate traffic not only for our product, but for *all* the products in your store.

An investment of $100 in periodicals, normally will result in $127 of sales within 30 days. Not bad! Then think of all the other products you will sell. Further, since all unsold copies of our product are returnable for credit, there is absolutely no risk.

But perhaps the most important fact is that periodicals have an unselfish way of helping to sell every other product in your store. Take a look at the pages of our magazines and see how they showcase just about every other product that you sell over and over again. It is like having a built-in salesman.

To learn how you can really "help yourshelf," why not give us a call;

The Maryland News Distributing Co.
(301) 233-4545
Ask about periodicals, the unselfish product.

Accord: *Terry* v. *California State Board of Pharmacy*, 395 F. Supp. 94 (ND Cal. 1975), appeal pending, No. 75-336. Contra: *Urowsky* v. *Board of Regents*, 46 A. D. 2d 974, 362 N. Y. S. 2d 46 (1974); *Supermarkets General Corp.* v. *Sills*, 93 N. J. Super. 326, 225 A. 2d 728 (1966).

See Note: Commercial Speech—an End in Sight to *Chrestensen?* 23 DePaul L. Rev. 1258 (1974); Comment, 37 Brooklyn L. Rev. 617 (1971); Comment, 24 Wash. and Lee L. Rev. 299 (1967).

[13] In *Head* v. *New Mexico Board*, 374 U. S. 424 (1963), the First Amendment issue was raised. This Court refused to consider it, however, because it had not been presented to the state courts, nor reserved in the notice of appeal here. *Id.*, at 432 n. 12. The Court's action to this effect was noted in *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations*, 413 U. S. 376, 387 n. 10 (1973). The appellant at the oral argument recognized that *Head* was a due process case. Tr. of Oral Arg. 10.

[14] "In the absence of Section 54-524.35 (3), some pharmacies in Virginia would advertise, publish and promote price information regarding prescription drugs." Stipulation of Facts ¶ 26, App. 15.

[15] The dissent contends that there is no such right to receive the nformation that another seeks to disseminate, at least not when the person objecting could obtain the information in another way, and could himself disseminate it. Our prior decisions, cited above, are said to have been limited to situations in which the information sought to be received "would not be otherwise available"; emphasis is also placed on the appellees' great need for the information, which need, assertedly, should cause them to take advantage of the alternative of digging it up themselves. We are aware of no general principle that freedom of speech may be abridged when the speaker's listeners could come by his message by some other means, such as seeking him out and asking him what it is. Nor have we recognized any such limitation on the independent right of the listener to receive the information sought to be communicated. Certainly, the recipients of the political publications in *Lamont* could have gone abroad and thereafter disseminated them themselves. Those in *Kleindienst* who organized the lecture tour by a foreign Marxist could have done the same. And the addressees of the inmate correspondence in *Procunier* could have visited the prison themselves. As for the recipients' great need for the information sought to be disseminated, if it distinguishes our prior cases at all, it makes the appellees' First Amendment claim a stronger rather than a weaker one.

[16] See *Bigelow* v. *Virginia*, 421 U. S., at 820 n. 6, citing Mr. Justice Douglas' observation in *Cammarano* v. *United States*, 358 U. S. 498, 514 (1959) (concurring opinion), that the *Chrestensen* ruling "was casual, almost offhand. And it has not survived reflection"; the similar observation of four Justices in dissent in *Lehman* v. *City of Shaker Heights*, 418 U. S. 298, 314 n. 6 (1974); and expressions of three Justices in separate dissents in *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations*, 413 U. S., at 393, 398, and 401. See also Mr. Justice Douglas' comment, dissenting from the denial of certiorari, in *Dun & Bradstreet, Inc.* v. *Grove*, 404 U. S. 898, 904-906 (1971).

[17] The speech of labor disputants, of course, is subject to a number of restrictions. The Court stated in *NLRB* v. *Gissel Packing Co.*, 395 U. S. 575, 618 (1969), for example, that an employer's threats of retaliation for the labor actions of his employees are "without the protection of the First Amendment." The constitutionality of restrictions upon speech in the special context of labor disputes is not before us here. We express no views on that complex subject, and advert to cases in the labor field only to note that in some circumstances speech of an entirely private and economic character enjoys the protection of the First Amendment.

[18] The point hardly needs citation, but a few figures are illustrative. It has been estimated, for example, that in 1973 and 1974 per capita drug expenditures of persons over the age of 65 were $97.27 and $103.17, respectively, more than twice the figures of $41.18 and $45.14 for all age groups. Cooper & Piro, Age Differences in Medical Care Spending, Fiscal Year 1973, Social Security Bulletin, HEW, SSA, Volume 37, No. 5, at 6 (1974); Mueller & Gibson, Age Differences in Health Care Spending, Fiscal Year 1974, Social Security Bulletin, HEW, SSA, Volume 38, No. 6, at 5 (1975). These figures, of course, reflect the higher rate of illness among the aged. In 1971, 16.9% of all Americans over the age of 65 were unable to carry on major activities because of some chronic condition, the figure for all ages being only 2.9%. Social Indicators, 1973, Statistical Policy Division, Office of Management and Budget 36 (1973). These figures eloquently suggest the diminished capacity of the aged for the kind of active comparison shopping that a ban on advertising makes necessary or desirable. Diminished resources are also the general rule for those over 65; their income averages about half that for all age groups. Social Indicators, *supra*, at 176.

The parties have stipulated that a "significant portion of income of elderly persons is spent on medicine." Stipulation of Facts ¶ 27, App. 15.

[19] For the views of a leading exponent of this position, see A. Meiklejohn, Free Speech and Its Relation to Self-Government (1948). This Court likewise has emphasized the role of the First Amendment in guaranteeing our capacity for democratic self-government. See *New York Times Co.* v. *Sullivan*, 376 U. S. 254, 269-270 (1964), and cases cited therein.

[20] Pharmaceuticals themselves provide a not insignificant illustration. The parties have stipulated that expenditures for prescription drugs in the United States in 1970 were estimated at $9.14 billion. Stipulation of Facts ¶ 17, App. 12. It has been said that the figure for drugs and drug sundries in 1974 was $9.695 billion, with that amount estimated to be increasing about $700 million per year. Worthington, National Health Expenditures 1929-1974, Social Security Bulletin, HEW, SSA, Volume 38, No. 2, at 9 (1975). The task of predicting the effect that a free flow of drug price information would have on the production and consumption of drugs obviously is a hazardous and speculative one. It was recently untaken, however, by the staff of the Federal Trade Commission in the course of its report, see n. 11, *supra*, on the merits of a possible Commission rule that would outlaw drug price advertising restrictions. The staff concluded that consumer savings would be "of a very substantial magnitude, amounting to millions of dollars per year." Staff Report, at 181.

[21] An argument not advanced by the Board, either in its brief or in the testimony proffered prior to summary judgment, but which on occasion has been made to other courts, see, *e. g.*, *Pennsylvania State Board of Pharmacy* v. *Pastor*, 441 Pa. 186; 272 A. 2d 487 (1971), is that the advertisement of low drug prices will result in overconsumption and in abuse of the advertised drugs. The argument prudently has been omitted. By definition, the drugs at issue here may be sold only on a physician's prescription. We do not assume, as apparently the dissent does, that simply because low prices will be freely advertised, physicians will overprescribe, or that pharmacists will ignore the prescription requirement.

[22] Monitoring, even if pursued, is not fully effective. It is complicated by the mobility of the patient; by his patronizing more than one pharmacist; by his being treated by more than one prescriber; by the availability of over-the-counter drugs; and by the antagonism of certain foods and drinks. Stipulation of Facts ¶¶ 30-47, App. 16-19. Neither the Code of Ethics of the American Pharmaceutical Association nor that of the Virginia Pharmaceutical Association requires a pharmacist to maintain family prescription records. *Id.*, ¶ 42, App. 18. The appellant Board has never promulgated a regulation requiring such records. *Id.*, ¶ 43, App. 18.

[23] Descriptions of the pharmacist's expertise, its importance to the consumer, and its alleged jeopardization by price advertising are set forth at length in the numerous summaries of testimony of proposed witnesses for the Board, and objections to testimony of proposed witnesses for the plaintiffs, that the Board filed with the District Court prior to summary judgment, the substance of which appellees did not contest. App. 4, 27-48, 52-53. Brief for Appellants 4-5 and n. 2.

[24] In concluding that commercial speech enjoys First Amendment protection, we have not held that it is wholly undifferentiable from other forms. There are commonsense differences between speech that does "no more than propose a commercial transaction" *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations*, 413 U. S., at 385, and other varieties. Even if the differences do not justify the conclusion that commercial speech is valueless, and thus subject to complete suppression by the State, they nonetheless suggest that a different degree of protection is necessary to insure that the flow of truthful and legitimate commercial information is unimpaired. The truth of commercial speech, for example, may be more easily verifiable by its disseminator than, let us say, news reporting or political commentary, in that ordinarily the advertiser seeks to disseminate information about a specific product or service that he himself provides and presumably knows more about than anyone else. Also, commercial speech may be more durable than other kinds. Since advertising is the *sine qua non* of commercial profits, there is little likelihood of its being chilled by proper regulation and foregone entirely.

Attributes such as these, the greater objectivity and hardiness of commercial speech, may make it less necessary to tolerate inaccurate statements for fear of silencing the speaker. Compare *New York Times Co.* v. *Sullivan*, *supra*, with *Dun & Bradstreet, Inc.* v. *Grove*, *supra*. They may also make it appropriate to require that a commercial message appear in such a form, or include such additional information, warnings and disclaimers, as are necessary to prevent its being deceptive. Compare *Miami Herald Publishing Co.* v. *Tornillo*, 418 U. S. 241 (1974), with *Banzhaf* v. *FCC*, 132 U. S. App. D. C. 14, 405 F. 2d 1082 (1968), cert. denied, *sub nom. Tobacco Institute, Inc.* v. *FCC*, 396 U. S. 842 (1969). Compare *United States* v. *95 Barrels of Vinegar*, 265 U. S. 438, 443 (1924) ("It is not difficult to choose statements, designs and devices which will not deceive.") They may also make inapplicable the prohibition against prior restraints. Compare *New York Times Co.* v. *United States*, 403 U. S. 713 (1971), with *Donaldson* v. *Read Magazine*, 333 U. S. 178, 189–191 (1948); *FTC* v. *Standard Education Society*, 302 U. S. 112 (1937); *E. F. Drew & Co.* v. *FTC*, 235 F. 2d 735, 739–740 (CA2 1956), cert. denied, 352 U. S. 969 (1957).

[25] We stress that we have considered in this case the regulation of commercial advertising by pharmacists. Although we express no opinion as to other professions, the distinctions, historical and functional, between professions, may require consideration of quite different factors. Physicians and lawyers, for example, do not dispense standardized products; they render professional *services* of almost infinite variety and nature, with the consequent enhanced possibility for confusion and deception if they were to undertake certain kinds of advertising.

[1] In recent years the soundness of the sweeping language of the *Valentine* opinion has been repeatedly questioned. See *Bigelow* v. *Virginia*, 421 U. S. 809, 819–821; *Lehman* v. *City of Shaker Heights*, 418 U. S. 298, 314–315 and n. 6 (Brennan, J., dissenting); *Pittsburgh Press Co.* v. *Pittsburgh Comm'n on Human Relations*, 413 U. S. 376, 398 (Douglas, J., dissenting); *id.*, at 401 and n. 6 (Stewart, J., dissenting); *Dun & Bradstreet, Inc.* v. *Grove*, 404 U. S. 898, 904–906 (Douglas, J., dissenting from the denial of certiorari).

[2] *Police Department of Chicago* v. *Mosley*, 408 U. S. 92, 95. See, *e. g.*, *Hudgens* v. *NLRB*, — U. S. —, —, slip op., at 13; *Erznoznik* v. *City of Jacksonville*, 422 U. S. 205, 209; *Pell* v. *Procunier*, 417 U. S. 817, 828; *Grayned* v. *City of Rockford*, 408 U. S. 104, 115.

[3] Speech by an employer or a labor union organizer that contains material misrepresentations of fact or appeals to racial prejudice may form the basis of an unfair labor practice or warrant the invalidation of a certification election. See, *e. g.*, *Sewell Mfg. Co.*, 138 N. L. R. B. 66; *United States Gypsum Co.*, 130 N. L. R. B. 901; *The Gummed Products Co.*, 112 N. L. R. B. 1092. Such restrictions would clearly violate First Amendment guarantees if applied to political expression concerning the election of candidates to public office. See *Vanasco* v. *Schwartz*, — F. Supp. — (EDNY) (3-judge court), aff'd, — U. S. —. Other restrictions designed to promote antiseptic conditions in the labor relations context, such as the prohibition of certain campaigning during the 24-hour period preceding the election, would be constitutionally intolerable if applied in the political arena. Compare *Peerless Plywood Co.*, 107 N. L. R. B. 427, with *Mills* v. *Alabama*, 384 U. S. 214.

[4] In the labor relations area, governmental regulation of expression by employers has been justified in part by the competing First Amendment associational interests of employees and by the economic dependence of employees on their employers. See *NLRB* v. *Gissel Packing Co.*, *supra*, at 617–618; *NLRB* v. *Virginia Electric & Power Co.*, 314 U. S. 469, 477.

[5] The Court is *Gissel Packing Co.* emphasized the NLRB's expertise in determining whether statements by employers would tend to mislead or coerce employees. 395 U. S., at 620. The NLRB's armamentarium for responding to material misrepresentations and deceptive tactics includes the issuance of cease and desist orders and the securing of restraining orders. See 29 U. S. C. §§ 160 (c), (j) (1970).

[6] As the Court observed in *Cantwell* v. *Connecticut*, 310 U. S. 296, 310:

"To persuade others to his own point of view, the pleader, as we know, at times, restorts to exaggeration, to vilification of men who have been, or are, prominent in church or state, and even to false statement. But the people of this nation have ordained in the light of history, that, in spite of the probability of excesses and abuses, these liberties are, in the long view, essential to enlightened opinion and right conduct on the part of the citizens of a democracy."

[7] See Note, Developments in the Law—Deceptive Advertising, 80 Harv. L. Rev. 1005, 1030–1031.

[8] The information about price and product conveyed by commercial advertisements may of course stimulate thought and debate about political questions. The drug price information at issue in the present case might well have an impact, for instance, on a person's views concerning price control issues, government subsidy proposals, or special health care, consumer protection, or tax legislation.

*The Court contends, *ante*, p. 9 n. 15, that this case is indistinguishable from *Procunier*, *Kleindienst*, and *Lamont*, in that in all of those cases it was possible for the parties to obtain the information on their own. In *Procunier* this would have entailed traveling to a state prison; in *Kleindienst* and *Lamont*, traveling abroad. Obviously such measures would limit access to information in a way that the requirement of a phone call or a trip to the corner drug store would not.

If prescription drugs may be advertised they may be advertised on television during family viewing time. Nothing we know about the acquisitive instincts of those who inhabit every business and profession to a greater or lesser extent gives any reason to think that such persons will not do everything they can to generate demand for these products in much the same manner and to much the same degree as demand for other commodities has been generated.

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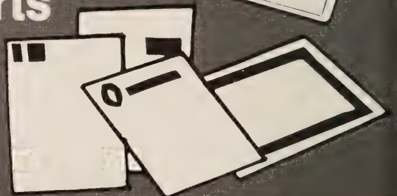

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THE
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BICENTENNIAL REFLECTIONS AND PROJECTIONS FOR PHARMACY

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650 WEST LOMBARD STREET
BALTIMORE MARYLAND 21201
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editorial

BICENTENNIAL REFLECTIONS AND PROJECTIONS FOR PHARMACY

The observance of our nation's Bicentennial causes us to reflect upon the circumstances and conditions at the time this country was founded. It stimulates us to think of the contrasts between 1776 and today, to try to discern what is meaningful in the history of the past era, what lessons we may learn and what we can expect in the future. Finally, this time of introspection can perhaps lead us to try to make plans to meet our projections of the future.

Let us, then, try to apply this process in some measure to the profession of pharmacy.

In the colonial period, pharmacy — the preparation and dispensing of medicine — was primarily in the hands of physicians, their apothecary apprentices and the few apothecaries who were produced by this system. Until American schools of pharmacy were established beginning with the Philadelphia College of Pharmacy in 1821, the only apothecaries with formal academic preparation were products of European universities.

Pharmacies soon developed along the British model where many sundry items were sold, rather than following the European continental model where pharmacies confined their functions to pharmacy practice — manufacturing, compounding and dispensing.

It was not until the early years of the twentieth century that formal academic education became a universal requirement for licensure. Establishment of more than one pharmacy by a single owner resulted in chains and corporate non-pharmacist ownership.

Hospital pharmacies until recent decades were usually located in basements with much pharmacist time spent filling ward baskets.

Until about a decade ago, pharmacy education and practice was based upon products known as drugs or medicines, with emphasis on the knowledge and skills to convert crude drugs and chemical ingredients into dosage forms.

The efficiencies and economies of the pharmaceutical manufacturer and the introduction of complex synthetic substances eliminated most of the compounding and most of the traditional mystique of the "corner druggist." The advent of consumerism has removed laws such as "fair trade" and prohibitions on advertising.

The orientation of pharmaceutical education fortunately has changed from producing individuals primarily qualified to be compounders and dispensers — "junior chemists" — to pharmacists who are patient oriented. Our graduates have been introduced to clinical settings and clinical data with opportunities for application of their education and training to patient care.

At the same time that we see a decline in individual proprietorship of pharmacies and an increase in corporate chain ownership, we have had a great expansion in the institutional pharmacy sector. There has been, therefore, a substantial growth in the number of pharmacists in hospital pharmacy. Concurrently, there has been a significant number of pharmacists motivated to establish or convert to pharmacies that emphasize pharmaceutical services with inventories restricted to health related products.

But the rapid growth in the post World War II period has been in the traditional chain, discount chain and supermarket chain pharmacies.

Marginal independent pharmacies are almost gone in Maryland. The medium and large size independents who are applying modern management techniques, combined with personalized pharmacy service are able to cope, and in most cases flourish.

What are the portents for the future?

1. More health service through institutional and organized forms, with pharmacy service included.
2. Continued growth of chains.
3. Continued limited growth of individually owned smal apothecary shops as well as medium and large independents.
4. As the percentage of employed pharmacists (now about 66% in Maryland) grows, more pharmacists will seek the benefits and security of unions, especially if ignored by management.
5. More pharmacist involvement in patient oriented pharmacy services.
6. Growth of third-party pharmacy programs both private sector and governmental, with eventually a national health insurance system.
7. A coordinated, integrated national pharmacy organization to counterbalance big government dictatorship in health matters.
8. Development in the near future of closer pharmacy industry relations for cooperation in mutual concerns.
9. In pharmaceutical education, adoption of the Doctor o Pharmacy as the single professional degree, with prope emphasis on clinical and socio-economic aspects o pharmaceutical services. Ancillary personnel will be used to carry out routine dispensing and related functions under pharmacist supervision.
10. Increased support of state and local pharmaceutical associations and their political action arms as pharmacists belatedly recognize the necessity for unified, strong action to assure professional and economic survival.

Depending upon your particular niche in the world of pharmacy, you may or may not like or agree with one observer's crystal ball. But barring unforeseen developments or a radica change in the motivation of pharmacists, we may reasonably expect most of these predictions to unfold in our nation's third century.

—Nathan I. Gruz

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Address of 1975–76 President

ACCOMPLISHMENTS, PROBLEMS AND RECOMMENDATIONS

Address of Henry G. Seidman
94th Annual Convention
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When my term in office began last June, there were a number of challenges that appeared sufficiently formidable to warrant that my year would be neither inactive, nor undemanding, nor free of problems. And appearances were correct. It was quite active, most demanding and there were problems. Actually, the total year could be accurately described as a mixture of accomplishment and gratification, some frustrations and disappointments. I spoke at that time, a year ago, of my hopes and plans, and I mentioned that purpose, unity, and strength would be key words on which our activities would be built. And it was interesting to note that these were not simply catch words but had some meaningful application. In the last third of the year, in a period of stress when our members were in imminent danger with respect to their practices — and I speak of the MAC (Maximum Allowable Cost) which was the government imposed prescription price program, they responded in a unified, positive action to force a delay in the effective date while they gained time to review and to recommend further pricing information before implementation of the program. While most of the credit for this successful interim action must be given to Pharmpac, the Political Action Committee of the Maryland Pharmaceutical Association, the basic group that answered the call for contribution of funds was made up of association members. The lesson learned here was that if there was a time when unity and strength had to be demonstrated effectively, this was it.

When we entered this year, it was my hope that we would materially increase our membership. I had optimistically envisioned over 100 new members. We didn't quite make this figure, but we did reach almost 90 new members as of this date. As we know, there isn't a pharmacist today, regardless of his area or sphere of practice, who doesn't benefit from the activities of the Maryland Pharmaceutical Association, and I believe that our constant efforts to communicate effectively with our affiliate and associate groups will bring about a widening ring of support. Our membership must continue to grow. With this in mind it was my privilege during the year to represent the Association at meetings of many pharmaceutical groups. My local itinerary included meetings of the Allegany–Garrett County Pharmaceutical Association, the Anne Arundel Pharmaceutical Association, the Baltimore Metropolitan Pharmaceutical Association, the Eastern Shore Pharmaceutical Society, the Upper Bay Pharmaceutical Association. In each instance, and many of these were dinner meetings to which my wife was invited as well, I was most impressed with the hospitality and graciousness of our hosts. Also, the business of the meetings proved to me unequivocally that every group to which I spoke was interested in Association affairs and offered cooperative effort whenever called upon. We shall, I trust, increase regular discourse with these groups and share our concern and goals.

I was happy to have met with the Maryland Society of Hospital Pharmacists at the combined meeting of that society and MPhA, and I was pleased to accept invitations to meet with a number of diverse groups throughout the year, all of them representing some phase of pharmacy interest or related activity. In addition to these related groups, I had the opportunity to attend the Annual Meeting of the American Association of Colleges of Pharmacy last July in New York State, the AACP-National Boards of Pharmacy District #2 Meeting in Washington, D. C. in December. From the deliberation of these bodies and the American Pharmaceutical Association will come the recommendations that will provide the future path of pharmacy practice.

The AACP-APhA Task Force this time last year issued its final report on the *Continuing Competence of Pharmacists*. It is a thorough and extremely brilliant treatise of this subject and should be reviewed by everyone. Likewise, the release of the *Millis Report* in December is expected to have a major influence on the development of the pharmacy profession and is envisioned by many as its blueprint for the future. Its major concepts and recommendations are must reading for pharmacists who will be expected to make judgements on the report in the future. All professional bodies of Pharmacy are asked to give serious attention to this report. It touches both pharmacy education and pharmacy practice. The studied judgments in these reports embody procedures for developing professional standards of practice and competence; for developing the mechanism of applying these standards and measurement systems. We must review and examine these findings so that we can take intelligent action.

We must also take a stand very soon on the issue of several levels of supportive personnel, such as pharmacy technicians and aides. We will again be faced with action on mandatory continuing education, and a measure to make the patient profile a mandatory part of every practitioner's daily practice. Our Association has been working for many months to shape these proposals into suitable form for introduction as legislation or regulations in the near future. As I stated last year, the completion of a successful legislative program needs wisdom and diligence. This year, under the guidance of Richard Parker, it succeeded in both. We did not score 100% in our efforts, but we did manage to make considerable gains. We did not gain mandatory continuing education, but were successful in many other areas and we did block the passage of much undesirable legislation. We were effective and we were heard.

Our Pharmacy Practices Committee chaired by Mel Rubin has been, year round, one of the most active of all committees. His work is ongoing, extremely important, involved, and time consuming. Mel is well prepared for his future role. Prescription Insurance, that is, third party plans, has had a stormy year and is now in the thick of price and policy problems. Marvin Friedman is handling his committee with a great deal of restraint and skill.

Our Continuing Education Committee has performed superbly this year, and the compliments it elicited so rightfully go to Dr. Ralph Shangraw, the chairman, and his committee. Under Dr. C. Jeleff Carr, an outstanding Swain Seminar Program was planned and conducted. The Simon Solomon Pharmacy Economics Seminar, chaired by Dr. Francis Palumbo, was equally well presented and accepted. The Public Relations Committee with our best neighbor, Charles Spigelmire, constantly doing what he does so well — selling the pharmacists of Maryland to the public — has had another non-stop year of activity. The Membership Committee did the job that we asked them to do and did it well. This is always a tiresome task and a most difficult one. Insufficient communications from one area to another is discouraging and disappointing, but Elwin Alpern persevered and we did, as I mentioned earlier, make a significant gain in membership this year.

Ron Lubman chairs the Convention and Trips Committee this year, and this has not been an unmixed pleasure for him. Cancellation of a sold out trip meant only additional work and trouble for Ronnie, but as usual, he accepts adversities philosophically and continues to plan future and better trips which I trust you will all support. His convention activities are going to become more evident in the next two days, and I know that with the effort and dedication he is giving to this convention, as he has in the past to such functions, we are in for a fine affair.

To all these chairmen whose committees I have mentioned and the other chairmen whose committees were no less important, to Bernie Lachman, Stanley Yaffe, Donald Fedder, Dr. Peter Lamy, Irvin Kamanitz, Dr. Thomas Sisca, and Paul Freiman, my special gratitude to all of you. Good chairpeople and committees are the working element of any organization. The degree to which they apply themselves and succeed determines the success of the entire body.

The House of Delegates led by Speaker Kamenetz will, I am sure, devote adequate time to the discussion and possible solution of some of our problems. The House must function well for the good of the Association. We were fortunate to have the B. Olive Cole Pharmacy Museum in the Kelly Memorial Building included in the Bicentennial Campus Tour and we are sharing in the total campus observance of the Bicentennial Year celebration. Join in the Campus Tour, if you can.

We are appreciative of the interest and guidance the Association received this year from Dr. William J. Kinnard, Jr., Dean of the School of Pharmacy. The Dean's positive and constructive commentary on pharmacy generally is a great source of information and elucidation to us. We are likewise indebted to Joe Kaufman, counsel to the Association, for his graciousness and his availability for consultation at all times. I want to thank Joe for providing critical assessments and sound advice.

The changing face of the Maryland State Board of Pharmacy is another area of supreme importance to the pharmacist. The introduction of a lay individual and an additional pharmacist to serve on the Board will, I hope, add strength to the Board's actions. It will also, I am sure, help to create better understanding, both to the profession and to the public of the many functions the Board performs.

I arranged meetings this year with executives of the major Baltimore chain drug corporation and also with the incoming President of the Maryland Society of Hospital Pharmacists, to try to bring their respective organizations into closer unity with the Maryland Pharmaceutical Association. So far, I have not met with success. I can only hope that these efforts will be pursued and that common objectives and common dangers will move us closer together.

I wish to acknowledge the interest and participation of the Student APhA-MPhA chapter members at our meeting this year. I hope that they will continue to lend their input to Association proceedings so that all of us will benefit therefrom.

To LAMPA (the Ladies Auxiliary of the Maryland Pharmaceutical Association), my sincere thanks for their cooperation and for the vital role they play in the success of our regionals and conventions. And to TAMPA (the Travelers Auxiliary of the Maryland Pharmaceutical Association), my sincere gratitude for their continuing assistance to the Association and their efforts to insure the success of our Regional and Annual Meetings.

The things that I believed last year were possible of accomplishment were for the most part, done. They were done with your continued understanding and support. When I look back to the things that were not done, I see the need for changes and for revised thinking. I would then like to leave several recommendations to be considered by my successor. (1) Ideally, if sufficient staff were available, the office should continue to function fully during the active legislative session from January to April, as well as throughout the year. (2) Priorities on occasion must be determined by consultative decision. (3) Our journal, *The Maryland Pharmacist,* must be brought to current status to be of greater value and I am glad steps are now being taken to see that this is done. I should point out that we do have the timely, informative MPhA Newsletter under the capable chairmanship of Mel Rubin. (4) Adequate additional resources and staff, if needed, should be provided in order to properly implement these recommendations.

In closing, I wish to express my sincere appreciation for the opportunity to represent all of you during the past year. It was a singular honor I shall always remember. I want to express my gratitude to the officers and members of the Board of Trustees for their confidence and support, and especially to Paul Freiman, chairman of the Board, for his incisiveness and candor. I am grateful to Executive Director Gruz for his counsel and assistance at all times. His is a momentous task. And lastly, but nearest my heart, my wife, Freda, my critic and booster who has endured this past year as she has done for so many, many years without complaint, with missed dinners and frequent changes in plans, to her my simple, "Thank you, dear."

As with most Presidents, I am sure that no single term in office of one year is long enough for one to do all the things one wanted to do. Although I did not succeed in achieving all my goals, where I succeeded, I am satisfied. Thank You.

MELVIN N. RUBIN

1976-77 President
Maryland
Pharmaceutical Association

Melvin N. Rubin was installed as President of the Maryland Pharmaceutical Association for 1976-77 at the Association's 94th Annual Convention.

A native of East Baltimore and a 1951 graduate of City College, Mr. Rubin graduated from the University of Maryland School of Pharmacy in 1955.

After service as a pharmacist in the United States Army from 1956 to 1958, Mr. Rubin was employed by Read's Drug Stores as a pharmacist until 1965 when he became a partner in the Paradise Pharmacy. With his associates, John J. Strauch and Kenneth Sumida, he operates three pharmacies.

Under his chairmanship, the MPhA Newsletter has developed into an effective communications service to the membership. In addition, he served as MPhA Legislative Chairman for 1974-75.

He served as Chairman of the Prescription Insurance Program Committee (Third Party) which had a large part in publication of a comprehensive chart of all programs in Maryland. He also played a leading role in the MPhA liaison activity with State Medical officials. His involvement in MPhA and BMPA activities has also included service on the following committees: Membership, Finance, Banquet, Convention and Seminars.

In addition to the presidency of the Maryland Pharmaceutical Association, Mr. Rubin is an active member of the American Pharmaceutical Association, the American Society of Hospital Pharmacists, the Maryland Society of Hospital Pharmacists and the National Association of Retail Druggists. Mr. Rubin served as 1974 President of the Baltimore Metropolitan Pharmaceutical Association and as a Clinical Instructor with the University of Maryland School of Pharmacy Professional Experience Program from 1971 to 1975.

A past Kappa Chapter President of the Alpha Zeta Omega pharmaceutical fraternity, Mr. Rubin is a recipient of the organization's Double Star Award for service to the pharmaceutical profession. He is a member of the Beth Israel Congregation.

Mr. Rubin is married to the former Phyllis Sindler of Baltimore. Mr. and Mrs. Rubin have two children.

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maryland board of pharmacy

Pharmacy changes — April, May, June

NEW PHARMACIES

Drugland Prescription Center, Joel Mitnick, President; 6023 Moravia Park Drive, Baltimore, Maryland 21206.

Giant of Maryland #244, J. B. Danzansky, President; 7920 Belair Road, Baltimore, Maryland 21236.

Colonial Apothecary, Glenn Wilson Nash, President; 1098 Mountain Road, Pasadena, Maryland 21122.

CHANGES OF OWNERSHIP

Winns Pharmacy, Philip Shermak; 2450 E. Fayette St., Baltimore, Maryland 21224.

Kay Cee Drugs, Stanley R. Newhouse; 6110 Old Silver Hill Road, District Heights, Suitland, Maryland 20028.

Park Avenue Pharmacy, Leon Rosen, President; 1535 Park Avenue, Baltimore Maryland 21217

Mercers Pharmacy, Donald John Ceccorulli; 243 North Market St., Frederick, Maryland 21701

Supersales Pharmacy, Bennett A. Friedman, President; Box 205, Downtown Gambrills, Maryland 21054.

CLOSED

Cameron Court Pharmacy, 8830 Cameron Court, Silver Spring, Md.

Koldewey's Pharmacy, 1801 W. Pratt St., Baltimore, Maryland 21223.

Hillendale Prescription Pharmacy, 1717 Taylor Avenue, Baltimore, Maryland 21234.

*Churchville Pharmacy, 2907 Churchville Road, Churchville, Md. 21028.

*(Presc. & files transferred to Thrift Drugs)

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[*] Ayd, F.J., Jr. (Ed.): Int. Drug Ther. Newslett. 7(9/10):35-50 (Nov./Dec.) 1972.

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Warnings: *Usage in Pregnancy:* Safe use of imipramine during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed.
Extreme caution should be used when this drug is given to

—patients with cardiovascular disease because of the possibility of conduction defects, arrhythmias, myocardial infarction, strokes and tachycardia;
—patients with increased intraocular pressure, history of urinary retention, or history of narrow-angle glaucoma because of the drug's anticholinergic properties;
—hyperthyroid patients or those on thyroid medication because of the possibility of cardiovascular toxicity;
—patients with a history of seizure disorder because this drug has been shown to lower the seizure threshold;
—patients receiving guanethidine or similar agents since imipramine may block the pharmacologic effects of these drugs

Since imipramine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as operating an automobile or machinery, the patient should be cautioned accordingly.
Usage in Children: Tofranil-PM, brand of imipramine pamoate, should not be used in children of any age because of the increased potential for acute overdosage due to the high unit potency (75 mg., 100 mg., 125 mg. and 150 mg.). Each capsule contains imipramine pamoate equivalent to 75 mg., 100 mg., 125 mg. or 150 mg. imipramine hydrochloride
Precautions: It should be kept in mind that the possibility of suicide in seriously depressed patients is inherent in the illness and may persist until significant remission occurs. Such patients should be carefully supervised during the early phase of treatment with Tofranil-PM, brand of imipramine pamoate, and may require hospitalization. Prescriptions should be written for the smallest amount feasible.
Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, Tofranil-PM, brand of imipramine pamoate, may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.
Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.
An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.
In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g., paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.
Avoid the use of preparations, such as decongestants and local anesthetics, which contain any sympathomimetic amine (e.g., adrenalin, noradrenalin), since it has been reported that tricyclic antidepressants can potentiate the effects of catecholamines.
Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.
Both elevation and lowering of blood sugar levels have been reported.
Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential, since there is limited clinical experience.
Adverse Reactions: Note: Although the listing which follows includes a few adverse reactions which have not been reported with this specific drug, the pharmacological similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when imipramine is administered.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.
Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.
Neurological: Numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.
Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.
Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue); drug fever; cross-sensitivity with desipramine.
Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.
Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdominal cramps, black tongue.
Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation or depression of blood sugar levels.
Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.
Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.
Dosage and Administration: In adult outpatients, therapy should be initiated on a once-a-day basis with 75 mg./day. This may be increased to 150 mg./day which is the dose level which usually obtains optimum response. If necessary, dosage may be increased to 200 mg./day. Dosage should be modified as necessary by clinical response and any evidence of intolerance. Daily dosage may be given at bedtime, or in some patients in divided daily doses.
Hospitalized patients should be started on a once-a-day basis with 100-150 mg./day and may be increased to 200 mg./day. Dosage should be increased to 250-300 mg./day if there is no response after two weeks.
Following remission, maintenance medication may be required for a longer period of time at the lowest dose that will maintain remission. The usual adult maintenance dosage is 75-150 mg./day on a once-a-day basis, preferably at bedtime.
In adolescent and geriatric patients, capsules of Tofranil-PM, brand of imipramine pamoate, may be used when total daily dosage is established at 75 mg. or higher. It is generally unnecessary to exceed 100 mg./day in these patients. This dosage may be given once a day at bedtime or, if needed, in divided daily doses.
How Supplied: Tofranil-PM, brand of imipramine pamoate: Capsules of 75, 100, 125 and 150 mg. (Each capsule contains imipramine pamoate equivalent to 75, 100, 125 or 150 mg. of imipramine hydrochloride.)
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For complete details, including dosage and administration, please refer to the full prescribing information.

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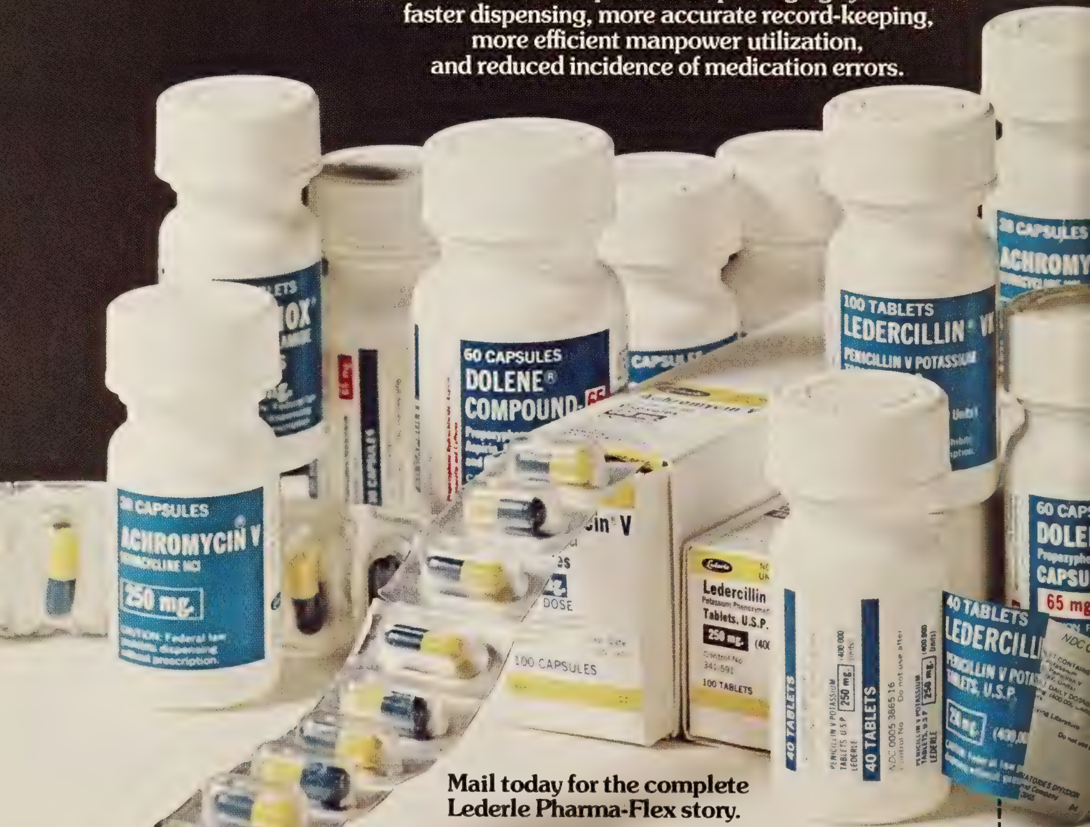
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Nitroglycerin Ointment 2%

by
James Quinlan, M.D.*
Ralph Shangraw, Ph.D.**

EVALUATION

The organic nitrates have the property of relaxing smooth muscle. In the cardiovascular system, the post capillary venules sensitive to gravity are especially affected by organic nitrates. Dilation results in pooling in the venules, a fall in venous return, a fall in stroke volume, and a fall in systolic pressure. All of these contribute to a reduction in myocardial oxygen requirements.

Sublingual nitrates have been used because of these desirable effects but the major shortcoming is a short duration of action. Nitroglycerin ointment (2%) has been demonstrated as a useful adjunct to therapy in patients with disabling angina. Davis (1) described the benefits as long ago as 1953, but his was an uncontrolled study. Attia did a controlled study in 1972 (2), with 11 of 15 patients showing marked improvement — i.e. requiring less than half the usual dose of Tng. per day. Reicheck demonstrated a three hour duration of improved exercise tolerance accompanied by a longer fall in the blood pressure, which also lasted for three hours (3). This was markedly better than what sublingual nitroglycerin or isosorbide could produce. Controlled clinical and physiological studies indicate that the 2% nitroglycerin ointment is effective in reducing the frequency of angina attacks.

It is also known that nitroglycerin can normalize depressed left ventricle function in response to exercise in patients with coronary artery disease without angina (4). Johnson demonstrated that sublingual nitroglycerin produced a prompt fall in the pulmonary artery hypertension associated with left ventricular failure and paroxysmal nocturnal dyspnea (5). Clinical improvement accompanied the objective improvement.

Thus, the effectiveness of organic nitrates in relief of angina pectoris or congestive failure is documented. The prolonged effectiveness of 2% nitroglycerin ointment has also been noted. The disturbing point is how one can effectively correlate a clinical response to an imprecise dose. The actual dose absorbed depends upon the amount of ointment, the surfact area, the degree of spreading, the thickness of the ointment, etc. (See below). In summary it is concluded that 2% nitroglycerin is effective for prolonged relief of angina pectoris both by subjective and objective criteria.

METHOD OF APPLICATION

Nitroglycerin ointment is a topical product containing 2% glyceryl trinitrate in a vehicle of lanolin and white petrolatum. The product is unique in that it is the only ointment applied topically in which the specific objective is to obtain systemic drug action. Although there is good clinical evidence that the product is effective, it is of utmost importance that a reproducible protocol be set up for its application.

1. Nitroglycerin ointment is measured in terms of inches of the ribbon extruded from the tube. The usual dose is a 1 to 2 inch ribbon applied 3 or 4 times daily. The optimum dose is determined by starting with a one inch application and increasing the dose ½ inch at a time until headache occurs and then decreasing to the largest dose which does not cause a headache.

   CAREFUL TITRATION OF THE PATIENT IS IMPORTANT.
2. Nitroglycerin ointment is applied over a 5 to 8 inch diameter area on the body. Site of application is commonly the chest but other areas of the body such as the leg can be used. **The size of the area of application should be kept constant.** Site of application should also be kept constant. If it is necessary to change site, it should be remembered that percutaneous absorption may change from one area to another. Although the chest is the most common site of application, **there is no direct action on the heart.**
3. Nitroglycerin ointment is usually applied in a thin uniform layer to the skin. The amount of rubbing will affect the rate and duration of clinical response. The measuring applicator is usually used to spread the ointment. If it is not used, absorption can occur through skin of the hand.
4. A plastic wrap covering is often used to protect clothing and prevent loss of ointment. **The occlusiveness of the protective covering plays a very important role in percutaneous absorption and will alter dose requirements.**

SUMMARY

In order to obtain maximum reproducibility of clinical response, it is important to keep the following factors constant:

1. Amount of Ointment
2. Area of Application
3. Site of Application (If possible)
4. Amount of Rubbing
5. Presence of Occlusive Bandage
6. Nature of Occlusive Bandage

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*Assistant Professor of Clinical Pharmacy, University of Maryland School of Pharmacy.

**Professor and Chairman of the Department of Pharmacy, University of Maryland School of Pharmacy.

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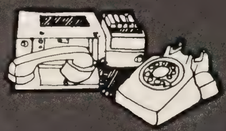

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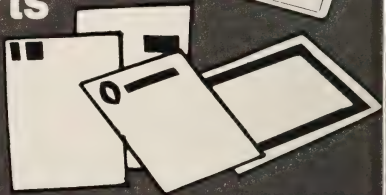

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Honors Convocation

Honors Convocation for the 1976 graduates of the School of Pharmacy, University of Maryland at Baltimore was held on Thursday, June 3.

Guest speaker for the event was Vincent R. Gardner, chief, Drug Studies Branch, Office of Research and Statistics, Social Security Administration, Washington, D. C.

Awards were presented by Dr. Ralph Shangraw, Professor and Chairman of the Department of Pharmacy.

Gold Medal for General Excellence: Carla Ann Mosser, Kitzmiller.

Certificates of Honor to holders of next highest averages: Paula Dawn Wolfe, Parkton; Karen Beth Demsky, Baltimore; Leslie Ann Silverberg, Baltimore.

L. S. Williams Practical Pharmacy Prize, to the senior student having the highest general average throughout the course in practical and dispensing pharmacy: Carla Ann Mosser, Kitzmiller.

Andrew G. DuMez Medal, for superior proficiency in pharmacy: Karen Beth Demsky, Baltimore.

Conrad L. Wich Pharmacognosy Prize, for exceptional work throughout the course in pharmacognosy: Paula Dawn Wolfe, Parkton.

Dr. and Mrs. Frank J. Slama Award, for superior work in the newer areas of pharmacognosy: Gary Allan Merica, Baltimore.

William Simon Memorial Prize, for superior work in the field of practical and analytical chemistry: Carla Ann Mosser, Kitzmiller.

Wagner Pharmaceutical Jurisprudence Prize, for meritorious academic achievement in pharmaceutical jurisprudence: Louis Silverstein, Havre de Grace.

John F. Wannenwetsch Memorial Prize, to a senior student majoring in general pharmacy who has exhibited exceptional performance and promise in the practice of community pharmacy: Richard Noll Fry, Greenbelt.

Kappa Chapter, Alpha Zeta Omega Fraternity Prize, to a senior student for proficiency in pharmacology: Vincent Lee Fabiano, Rockville.

Epsilon Alumnae Chapter, Lambda Kappa Sigma–Cole Award, to a senior student for proficiency in pharmacy administration: Dorothy Anne Boucher, Abingdon, Va.

Maryland Society of Hospital Pharmacists Award, to a senior student who shows promise in the area of hospital pharmacy: Sherry Lynn Williams, Baltimore.

The Frank J. Slama Award, by the school's Alumni Association to a graduating student who has excelled in extra-curricular activities: Alex Maurice Taylor, Baltimore.

Also announced at the senior honors convocation were those students eligible for honors and high honors.

High Honors: Carla A. Mosser, Kitzmiller; Paula D. Wolfe, Parkton; Karen B. Demsky, Baltimore; Leslie A. Silverberg, Baltimore; Joanne L. Travis, Wilmington, Del.; Lily L. Chua, Bethesda; Stephen S. Navran, Baltimore; and Linda C. Houchin, Laurel.

Honors: Gary A. Merica, Baltimore; George Groleau, Baltimore; Joseph Fallon, Lawrenceville, N. J.; John Gregory, Rockville; Vincent Fabiano, Wheaton; Dorothy Boucher, Abingdon, Va.; and Louis Silverstein, Havre de Grace.

This year's new members of **Rho Chi:**

Graduate Students: Michael F. Powell, Raymond L. Sapssil, Marc R. Summerfeld.

Fifth-Year Students: Dorothy A. Boucher, Vincent L. Fabiano, Paul F. Jarosinski, Stephen S. Navran, Louis Silverstein.

Fourth-Year Students: Carla J. Beckmann, Michelle K. Broll, Margaret C. Brophy, Thomas F. Carroll, Terri F. Clayman, James M. Easom, Irene M. Georgiou, Bonnie Levin, Sharmon M. Remmers, James W. Rhodes, Cathie L. Schumaker, Robert H. Schumaker, Paul J. Vitale, Mary Young.

calendar

September 9 (Thursday) — Maryland Society of Hospital Pharmacists, Johns Hopkins, 7:30 P.M.

September 10 (Friday) — Baltimore Veteran Druggists Association 50th Anniversary Luncheon, Broadview (Victorian Room)

September 15 (Wednesday) — Upper Bay Pharmaceutical Association Meeting, The Bush River Yacht Club, 10:15 P.M.

September 19–23 (Sunday, Monday, Tuesday, Wednesday, Thursday) — NARD Convention, San Francisco

September 28 (Tuesday) — Baltimore Metropolitan Pharmaceutical Association Meeting, Quality Court, Pikesville, 8:30 P.M.

October 14 (Thursday) — MPhA Fall Regional and House of Delegates Meeting

November 4 (Thursday) — MPhA Simon Solomon Pharmacy Economics Seminar

November 17 (Wednesday) — Upper Bay Pharmaceutical Association Meeting

November 18 (Thursday) — Baltimore Metropolitan Pharmaceutical Association Annual Meeting

1977

January 14–21 — MPhA Seminar and Tour — Acapulco and Mexico City

February 13 (Sunday) — BMPA Annual Banquet, Bluecrest

March 5–13 — MPhA Trip to Vail, Colorado

April 21 (Thursday) — MPhA Spring Regional and House of Delegates Meeting

The Colonial and Revolutionary Heritage of Pharmacy in America

by David L. Cowen*

INTRODUCTION

American pharmacy, in every facet of its origins and development, reflected the same social, political, and economic forces that moulded our nation. Its origins are part of the imperial motivations that led to discovery, exploration, and settlement; its early development — or lack of it — demonstrated the effect of frontier conditions on American life and institutions; its failure to attain a separate identity until well into the 19th century reflected both the British heritage of liberty and laissez-faire, and the relatively backward state of world science. Structurally, in 19th century America, American pharmacy was to reflect the federal system of government. Professionally, the progress of science, technology, and industrialization were to change pharmacy from an art into a science, with tremendous, if as yet undetermined, consequences for the present and future practice of pharmacy.

The history of pharmacy, thus, is the history of our country in microcosm. Whether it is in exploration and settlement, the Revolution, the new nationhood, Jacksonian democracy, slavery, industrialization, large-scale business enterprise, the Progressive Movement, or depressions great and small, pharmacy was a part of the whole drama. One could draw meaningful illustrations in writing a history of our country from the history of pharmacy: what more poignant statement of the condition of the American Revolutionary Army and the emotions stirred up by the war than that on the title page of the *Lititz Pharmacopiea* (1778) which lamented that it was "especially adapted to our present poverty and straitened circumstances due to the ferocious inhumanity of the enemy, and the cruel war unexpectedly brought upon our fatherland"?

It is hoped that this series of articles, helping to celebrate our Bicentennial to be sure, will point up the fact that pharmacy is an integral part of the American scene, that it did not develop *in vacuo*, and that as it examines its past and looks into the future, pharmacy will continue to recognize its intimate relationship to American history and American social developments.

Drugs, Empire and Trade

It may seem strange to start the history of Pharmacy in British North America with names like Richard Hakluyt and Sir Walter Raleigh, but it is strange only because school books have taught that the British sea hawks and merchant adventurers sought first gold and silver, and later tobacco, indigo and naval stores, and neglect to emphasize the importance of drugs and spices in the plans and expectations of the sea captains. Drugs and spices, it needs to be remembered, played a decisive role in the discovery of the New World; it was to be expected that interest in the was to continue into the age of exploration and settlement.

Hakluyt, writing in his *Discourse of Western Planting,* propounded strategic and economic arguments for establishing a English colony on the Virginia coast. His economic argument were a classic exposition of mercantilistic colonialism, and conspicuous among the products which the mother country coul expect to procure in the New colony were "dyes and drugs." I 1585 he placed men "skilful in all kinds of drugs" second only t men "skilful in mineral causes" in the list of 31 sorts of men h wanted for a forthcoming expedition.

The interest in drugs and spices — expressed even earlie (1576) by Sir Humphrey Gilbert — was directed principally toward medicinal plants. The British explorers of the Atlanti seaboard — Hawkins, Barlowe, Brereton, Pring, Rosier, an Hariot, to name some of them — all made reference in thei reports to the medicinal plants they encountered. The promotional literature that emanated from sea captains, Lords Proprietors, and chartered companies all stressed the abundance and availability of medicinal plants. Sometimes the opportunities for profit were pointed up, as when the Virginia Company emphasized the high market value of drugs to be found in the colony (1610); sometimes the stress was placed on the health potential of the drugs, as in the long list of drugs in John Josselyn's *New England Rarities Discovered* (1672). Captain John Smith, William Penn and General George Oglethorpe all made attractive references to medicinal plants in their accounts: indeed there was undoubtedly a good deal of puffery in their glowing propaganda. As a Pennsylvania booster wrote at the end of the 17th century:

A plentiful Land, O plentiful indeed,
For Plants, and Roots and Herbs.

Despite the exaggeration, however, the mother country did find the colonies a source of drugs, and a trade in drugs developed almost immediately. In 1602 one of Sir Walter Raleigh's ships returned with a cargo of timber and sassafras, china root, benjamin, sarsaparilla, cassia lignea, and an unknown "strong bark." These had been obtained by trading with the Indians in the vicinity of Cape Fear.

Of these plants sassafras was, and was to remain, the most important. Although the French had made note of the sassafras root as early as 1562-1564, it gained popularity in Europe quickly only after Monardes described it in 1574. Thomas Hariot, astronomer, mathematician, and man of learning who was responsible for the navigational planning of Raleigh's expeditions and who was himself a visitor to America in 1585, proclaimed sassafras a "sovereign remedy" possessing "many virtues." It was esteemed in "the French Poxe . . . the Plague, and many other Maladies."

David L. Cowen is Professor of History at Rutgers, the State University of New Jersey.

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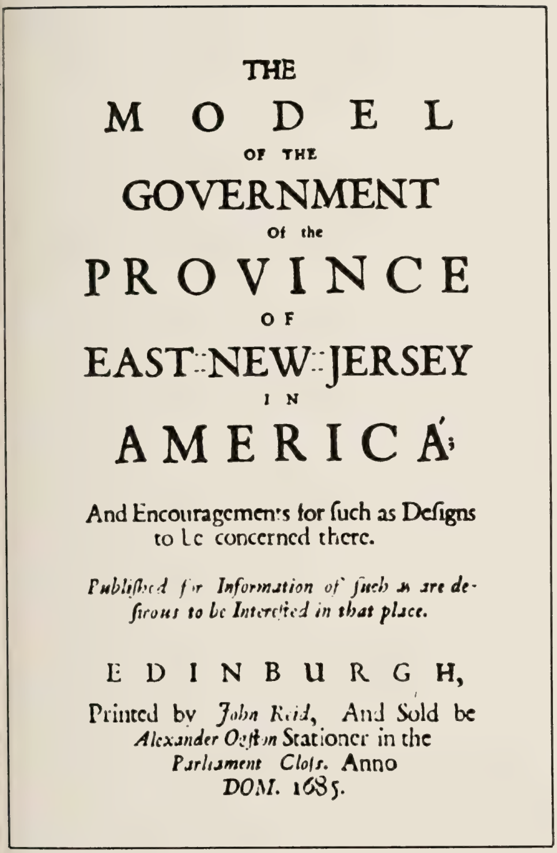


THE
MODEL
OF THE
GOVERNMENT
Of the
PROVINCE
OF
EAST-NEW-JERSEY
IN
AMERICA;

And Encouragements for ſuch as Deſigns
to be concerned there.

Publiſhed for Information of ſuch as are deſirous to be Intereſted in that place.

EDINBURGH,
Printed by *John Reid*, And Sold be
Alexander Ogſton Stationer in the
Parliament Cloſs. Anno
DOM. 1685.

Title page of a pamphlet seeking to entice settlers to New Jersey where, it said, "are an abundance of curious Herbs, Shrubs, and Trees; and no doubt Medicinall ones for making of drugs."

In fact, sassafras gained so phenomenal a reputation that Raleigh found it very profitable — in 1602 he reported that he was selling the product at from *L*1,000 to *L*2,000 a ton. Indeed the gains were so great that Raleigh had to fight off poachers on the monopoly rights he had been given, and investors were readily attracted to support expeditions if sassafras was a prospect. The Jamestown colony almost foundered because seamen and settlers alike stampeded into what must be called a sassafras rush. The sailors were said to have lost and ruined many tools and the colonists were said to be neglecting their cornfields in their eagerness to gather sassafras.

The price of sassafras fell precipitously after the establishment of Jamestown, and in 1620 Sir Edwin Sandys, head of the Virginia Company, reported that it was worth very little and recommended the control and curtailment of production. Yet the drug's medicinal reputation persisted and the promotional literature continued to point out the availability of the sassafras tree — in Maryland, New Jersey, and Georgia, for example. It continued to be exported throughout the colonial period and in 1770 alone England imported 76½ tons of sassafras, worth *L*2,142, from America.

The trade in sassafras brought with it two incidents, which, though admittedly tangential to our theme, are significant in terms of the events that were to take place some 150 years later and that we are commemorating. One concerned the attempt, in 1621, to gain exemption for poorer grades of sassafras (and of tobacco and sarsaparilla also) from the tariff when intended for re-export from England. The other, in the same year, involved the refusal of planters in Virginia to comply with a levy by Governor Wyatt, at the behest of the Company, of 66 lbs. of sassafras per man. The Governor insisted that the planters acted "out of contempt for authority." The problems that rocked the empire in the 1770's had had a long history!

During the colonial period supplies of other drugs than sassafras were to be exported from the American provinces. These included snakeroot, ipecacuanha, pink root, sarsaparilla, jalap, ginseng, sumach, tumeric, and castoreum (the last from beaver "codds"), among others. At the eve of the Revolution, in 1770, trade statistics indicated that the four most important of these at the time — castoreum, ginseng, snakeroot, and sassafras — had an export value of *L*5,142. That other parts of Britain's American empire had become more significant in this connection is evident from the fact that the total value of cortex eleutheria (cascarilla), cortex winteranus, and lignum vitae — that came from the West Indies and elsewhere — was about three and a half times as great, *L*18,225. The expectations of the mother country with regard to drugs were perhaps greater than the realization, but Britain did not fail to exploit the potential of the flora and fauna of its overseas colonies.

EARLY PHARMACY IN BALTIMORE

By B. F. Allen Ph.D.
Associate Professor of Pharmacy
University of Maryland School of Pharmacy

Founded in 1729, Baltimore Town expanded very slowly until 1750 when a combination of farm products (wheat and tobacco) and better roads caused the Patapsco River Basin to come alive and assure Baltimore's growth as a mercantile center.[1]

Christened Baltimore Town in honor of Charles Calvert, fifth Lord Baltimore,[2] the town in 1729 had about a dozen houses and a population of about a hundred persons. The location along the Patapsco River gave it easy access to the Chesapeake Bay.

In two decades the population increased to 3,500 with 350 houses and ten physicians who provided medicine in connection with their practice.[3] The town boundaries at this time covered approximately eighty-eight acres.

The first drug store was established by Dr. William Lyon in 1746 at Market (now called Baltimore) and Calvert streets.[4] It is said that Dr. Lyon was a practical man, without education, but with talent and the first "real" pharmacist in Baltimore. He was active in civic affairs, commanded much respect and took active measures to better the public health of the town.[5] Some years later, Dr. Lyon formed a partnership with a Mr. Walker. However, the firm was dissolved in 1772 and Dr. Lyon devoted all of his time to the practice of medicine.

The second drug store appears to have been established by Dr. Alexander Stenhouse in 1764 on Market Street. He studied medicine and pharmacy in Edinburgh and practiced in London before coming to Baltimore. His political ties to the Royalist Party caused the "Committee of Safety" to confiscate his stock of drugs. This forced his flight to Philadelphia and eventual return to England.

The third drug store was established by Dr. John Boyd in 1767 (location not identified). He was from the New England area and educated at Princeton (M.A. degree). He was probably the first in Baltimore to call himself a druggist and his place of business a "medical store". In 1775, Dr. Boyd was a member of the "Committee of Safety" and called upon the ladies of the town, through the newspapers, for lint and bandages for the troops. (Dr. John Boyd is buried in the Westminster graveyard, southeast corner Fayette and Greene Streets).

During this period of time it appears that practically all of the drug stores were operated by medical practitioners since the individuals involved were always referred to as "doctor".[6] Some of these were: Dr. Patrick Kennedy (1773) at the lower end of Market Street near the bridge (probably, today at Fallsway); Dr. Labesius (1778) at St. Paul's Lane; Dr. Andrew Aitken (1783) in the Fell's Point area; Dr. J. Tyler (1787) on Market Street and Dr. Anthony Mann (1789) on the northeast corner of Market and Calvert Streets. Dr. Mann's apothecary shop or drug store was named the "Golden Mortar".

Baltimore received its first impressions in higher pharmacy from France and from French refugees.[7] The interest which that country took in the American Revolution seemed to stimulate young pharmacists to risk their fortunes upon American soil. From among these and Acadian exiles, Baltimore was furnished with several reputable apothecaries. (Acadia: An early name for Nova Scotia).

In 1791, because of Napoleon and other European troubles, some French refugees from the mother country and colonies in the West Indies settled in the Baltimore area now known as Seton Hill (500 block North Paca Street).[8]

In 1793, many persons fleeing from the revolution and massacre of Santo Domingo took refuge in the city; thus, swelling its population to about fifteen thousand. Among these came one progressive pharmacist of rare ability and knowledge in the character of Monsieur Edme Ducatel.[9]

Of the Santo Domingo refugees of 1793, young Edme (Edmund) Ducatel happened to be a well-trained pharmacist who had attended the Ecole de Paris. In 1796, he established himself in business as a chemist and druggist at 26 West Baltimore Street (old number), third door west of Harrison Street. At this location, through scientific methods and ethical practices, he held for almost 40 years the unabated confidence of physicians and patrons, thereby giving to pharmacy in Baltimore its true birth, he being its "real" father.

Edme Ducatel was of small stature, dark complexion, quick in movement and speech (French) and usually was observed with some sort of flower between his lips (so moisture could be supplied). He was an experienced botanist — a man most helpful to the sons of fellow refugees and to many other deserving young men who sought positions in his store. Many later became physicians or self-established pharmacists who brought professional and commercial dignity to their several communities. (Therefore, in addition to his drug store activities, Mr. Ducatel was a pioneer pharmacy preceptor).

By admitting a son as a partner in 1818, the firm's name became "Edme Ducatel and Son" and shortly thereafter, a second son made it "Edme Ducatel and Sons".

Edme (also known as Edouard) Ducatel died around 1834 and this also ended the reputable business established on Baltimore Street. His early and consistent endeavor in behalf of professional retail pharmacy was recognized by his contemporaries as well as by posterity which has given him the title: "The Father of Baltimore Pharmacy". (Chartered as a city in 1799, Baltimore by 1814 had a population of nearly 50,000. It was the third largest city in America and its leaders frankly dreamed of becoming number one).[10]

John Michel LaRoque (1788-1864) was five years old when the LaRoque family escaped the Santo Domingo insurrection and reached Baltimore in 1793. After going through the city parochial schools he was accepted in Ducatel's store where he remained for some years, becoming thoroughly equipped in the science and art of pharmacy. In 1817, he established his own business at 20 West Baltimore Street, third door east of Ducatel's and at once entered into the manufacture of proprietary medicines. Two years later, the firm became "LaRoque and Milhau" and continued until 1827, when Mr. Milhau withdrew and moved to New York. LaRoque's son, John Phillip Emile (1820-71) succeeded to the business, which passed into the hands of strangers after his death and out of existence after the "Great Baltimore Fire" of 1904.

John F. Milhau (1795–1874) was born in Baltimore in 1795. His family was also among the Santo Domingo refugees who reached Baltimore that year. After elementary training in parochial and city schools, he was sent to the Emmitsburg Seminary (the seedling of Mount Saint Mary's College[13] which is located near Emmitsburg, Maryland in the northern part of the state on one of the routes to Gettysburg).

From the seminary he entered Ducatel's drug store where he practiced for several years and then in 1816 established his own store at 3 West Baltimore Street. In 1819, he abandoned this location and became a partner of Mr. LaRoque. After Mr. Milhau withdrew from the partnership, he spent several years in foreign study and travel. He then established on Broadway and Maiden Lane (New York City) a business, much after the lines of his former Baltimore connection, and in due time acquired an enviable name and trade.

In New York, John Milhau conducted, from 1830–1869, one of the best-known representatives of the older American professional pharmacies. He was one of the early leaders of the New York College of Pharmacy. The passage of a U. S. Drug Law in 1848 requiring the observance of certain standards (purity, strength, etc.) was due mainly to his persistent and conscientious efforts.[14]

Nicholas Monsarrat, a refugee of 1793, also obtained his training at Ducatel's. In 1819 he became apothecary to the Baltimore General Dispensary. Several years later he established his own drug store on West Baltimore Street (north side) near Light. His business was conducted under very rigid discipline and exacting methods.

Oscar Monsarrat (1813–1887) was a cousin of Nicholas Monsarrat and was literally brought up in his cousin's drug store. He remained in the retail drug business for 60 years and at one time operated a store at 113 South Broadway.[16] His pharmacy was most unpretentious with a stock consisting of simply drugs, without the slightest innovation of side-lines. (Note: Monsarrat was also sometimes spelled Monsurat and Monsurratt).

Elias Durand (1793–1873) was a native of France who served in her army under Napoleon. He emigrated to this country, locating first in New York, then Philadelphia, next Baltimore and finally Philadelphia.[17] While in Baltimore, he was employed at Ducatel's which was the only "real drug store" in the city, in the eyes of Frenchmen and many other citizens. Durand was not only a fine chemist but an unusual botanist; he devoted much time and study to botany, especially to the classification of indigenous plants.

He established a drug store in Philadelphia in 1825 and operated the first soda fountain in an American pharmacy.[18] Durand's store had much to do with the introduction of scientific pharmacy into Philadelphia. The most important part of the pharmacy was the stock of drugs, chemicals and the apparatus for making "carbonic acid water". In 1835 Durand was the first to introduce the bottling of mineral waters in this country.

Another store of this early period was founded in 1824 by Mr. Thomas G. MacKenzie (1802–1873), northeast corner of Baltimore and Gay Streets.[19] After a year the firm's name was changed to "Thomas G. MacKenzie and Company", and in 1827, at the death of his father, Dr. Colin MacKenzie (1775–1827), it was changed again to "MacKenzie and Company," inasmuch as his two brothers, prominent physicians with a following, had a monetary interest.

Thomas G. MacKenzie was the great moving spirit in establishing the Maryland College of Pharmacy. He was one of the organizers (1840) as well as one of the incorporators (1841) of the college.[20] The lectures at the new institution were given at the back of the store in his little office which was not larger than the hall of a home. In the absence of the regular lecturers, MacKenzie gave occasional talks.[21] The college functioned at this location during the period of 1840–44 and so monopolized all available space as to interfere seriously with other business uses. The first class (1840) consisted of six young men, one being Mr. LaRoque's son, Emile, who did not come up for graduation (1842). However, three men did and were successful (Frederick A. Cochrane, Alpheus P. Sharp, and William S. Thompson[22]).

George W. Andrews (1801–77) established a drug store in 1829 at 3 West Baltimore Street diagonally across from LaRoque's. He stressed these principles: "English and French chemicals, fresh and choice; test-reagents prepared to order; drugs and medicines, etc." He soon became a chemist of repute as well as a prescriptionist who enjoyed the implicit confidence of physicians and the public.[23] He was also one of the incorporators of the Maryland College of Pharmacy and its president for many years (1844–71).[24] Mr. Andrews grave is in the old Westminster Church graveyard.[25]

Notes and References

1. Maryland Historical Magazine, 69 (1974) 342–360.
2. Fred Kline, "Baltimore: The Hidden City", *National Geographic,* 147 (1975) 197.
3. B. Oliver Cole, "Notes on Early Pharmacy in Maryland", *Maryland Pharmacist,* 35 (1960) 676–680.
4. John R. Quinan, "The Medical Annuals of Baltimore" (1808–1880) p. 12.
5. Anon., "Persons Who Have Influenced Pharmacy in Maryland", Pharmaceutical Seminar (course paper) School of Pharmacy University of Maryland, no date (ca. 1960).
6. Robert J. Kokoski, "A Review of the Earlier History of Pharmacy in Baltimore", Pharmaceutical Seminar (course paper) School of Pharmacy, University of Maryland, October 29, 1957.
7. Annual Catalogue of the Maryland College of Pharmacy (Session 1891–92), 9.
8. The June 10, 1969 issue of the Baltimore Sunpapers.
9. David M. R. Culbreth, "Reminiscences of Early Pharmacy in Baltimore", *J. Amer. Pharm. Assoc.,* 17 (1928) 1212–13.
10. Frank A. Cassell, "The Great Baltimore Riot of 1812", *Maryland Historical Magazine,* 70 (1975) 241.
11. Reference 9, pp. 1213–1214.
12. Ibid.
13. Bernard C. Steiner, "History of Education in Maryland", Government Printing Office, Washington, 1894, pp. 161, 275.
14. Edward Kremers and George Urdang, "History of Pharmacy", 2nd Ed., J. B. Lippincott Co., Philadelphia, Pa., 1951, pp. 261, 418, 561.
15. Reference 9, p. 1214.

(Continued on page 36)

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

P·M·A

Pharmaceutical Manufacturers
Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

ANNUAL REPORT
OF THE
MARYLAND BOARD OF PHARMACY

In compliance with the provisions as set forth in Section 258 of Article 43 of the Annotated Code of Maryland, this report is submitted to the Honorable Marvin Mandel, Governor of Maryland, and to the Maryland Pharmaceutical Association. This is the seventy-fourth report to the Governor of the State and the sixty-fourth to the Association. The report covers the activities of the Maryland Board of Pharmacy for the fiscal year ending June 30, 1976. This report is also being submitted to the Secretary of Health and Mental Hygiene, the McKeldin Library of the University of Maryland, the Enoch Pratt Free Library, the Department of Legislative Reference, the Hall of Records and the State Library.

Personnel

During the year the Board held eighteen meetings, three of which were held at the Allied Health Professions Building of the University of Maryland, for the purpose of conducting examinations for registration of pharmacists.

At the meeting of the Board on July 9, 1975 the Board reorganized and elected Mr. Morris Yaffe President and Mr. C. H. Tregoe Secretary-Treasurer. Mr. Donald H. Noren, Director of the Environmental Health Administration, felt there could be a conflict with the Chief of the Division of Drug Control also being the Secretary-Treasurer of the Maryland Board of Pharmacy, and that Mr. Tregoe should phase out of his activities as Secretary-Treasurer of the Board within the year.

At the meeting of the Board on March 24, 1976, Mr. Robert E. Snyder was elected Temporary Secretary-Treasurer.

Examinations

The Board conducted two examinations for registration of pharmacists during the fiscal year. The first was held at the School of Pharmacy of the University of Maryland on November 5, 6, and 7, 1975. There were eighteen applicants who took the full examination. Two applicants failed. There was one applicant who took only the theoretical portion of the examination.

On June 16, 17, and 18, 1976 the Board of Pharmacy conducted another Board Examination at the Allied Health Professions Building at 22 South Greene Street. There were one hundred and one applicants who took the entire examination. Twenty-five applicants took the theoretical portion of the examination since they did not have the required experience to take the full Board. Two applicants took only the practical portion of the examination. One applicant took only the practical portion because she did not have the required experience for reciprocity and the other applicant took the practical portion because he had taken only the theoretical portion in November of 1975. There were a total of one hundred and twenty-eight applicants taking the examination during June.

The Standard Examination of the National Association of Boards of Pharmacy was given (as prepared by the Educational Testing Service of Princeton, New Jersey) which consisted of the following subjects:

Practice of Pharmacy
Pharmacology
Math
Chemistry
Pharmacy

The Jurisprudence examination which was compiled by a member of the Board was given as part of the practical portion of the examination. The results of the examination are not as yet available.

The following table shows the number of pharmacists who were registered by examination during the past ten years.

Year	Number of Pharmacists
1966-1967	58
1967-1968	41
1968-1969	60
1969-1970	93
1970-1971	112
1971-1972	133
1972-1973	96
1973-1974	111
1974-1975	113
1975-1976	

As in the past, many pharmacists applied for reciprocal registration in Maryland for various reasons. In all cases an applicant for reciprocal registration must appear for a personal interview. the entire Board must act on whether or not to grant registration to such applicants, who must sign agreements to comply with Maryland's laws pertaining to drugs and pharmacy.

The following table shows those granted registration by reciprocity thus far during the 1976 Fiscal Year.

Registered By Reciprocity

Name	Certificate Number	Dated	State
Robert D. Hager	8223	July 16, 1975	South Carolina
Stuart M. Becker	8224	July 17, 1975	New York
Philip H. Cogan	8225	July 17, 1975	Nevada
William O. Ruth	8226	July 17, 1975	Tennessee
Debra A. Proksch	8228	August 1, 1975	Idaho
Karen S. Kram	8230	August 1, 1975	New Jersey
Norman M. Gitomer	8231	July 28, 1975	District of Columbia
Judith Jo Lyon	8233	July 23, 1975	Iowa
Jacob Rankow	8234	July 30, 1975	New York
Mary Ann Oksza-Chocinowski	8124	August 1, 1975	West Virginia
Frederick L. Munford	8236	August 1, 1975	District of Columbia
Clark J. Potter	8237	August 1, 1975	New York
Mark S. Lenes	8238	August 5, 1975	New York
Louis L. Domsky	8239	August 13, 1975	Pennsylvania
Jane B. Peyton	8240	August 13, 1975	New Mexico
Barbara A. Kopelman	8241	August 29, 1975	Ohio
Jesse Cugini	8242	September 22, 1975	Pennsylvania
Dominick DePolo, Jr.	8243	September 22, 1975	West Virginia
Mark E. Fogg	8244	September 22, 1975	New York
William C. Glowacki	8245	September 22, 1975	Iowa
Melvin E. Liter	8246	September 22, 1975	Kentucky
Wallace Kleinman	8247	September 22, 1975	New Jersey
Elba C. Wikes	8248	September 22, 1975	Pennsylvania
Thomas J. Wilson	8249	September 22, 1975	Pennsylvania
David Abraham	8251	October 6, 1975	District of Columbia
Wilhelm-Hermann Reibert	8252	October 6, 1975	District of Columbia
Benjamin Hodes	8253	October 14, 1975	New York
Katherine L. del Padre	8254	October 15, 1975	Rhode Island
Godfrey S. Gray	8255	October 15, 1975	District of Columbia
Kathleen K. Ingalls	8256	October 15, 1975	Rhode Island
Jaspal S. Kochhar	8257	October 15, 1975	District of Columbia
Kenneth R. Ward	8258	October 16, 1975	North Dakota
Robert M. Koons	8259	October 20, 1975	Ohio
Sheldon W. Fantle	8260	October 31, 1975	Ohio
Emilene P. Marra	8261	October 31, 1975	West Virginia
Jean A. Jensen	8262	October 31, 1975	Virginia
Louis J. Rubenstein	8263	October 31, 1975	New York
Robert M. Berg	8264	November 13, 1975	Pennsylvania
John P. Beckley	8265	November 20, 1975	District of Columbia
Dennis J. Cuff	8266	November 20, 1975	Pennsylvania
Pearlina V. McMahon	8267	November 20, 1975	District of Columbia
Sharon A. New	8268	November 20, 1975	Tennessee
Thomas C. North	8269	November 20, 1975	Virginia
Stephen M. Slavet	8270	November 20, 1975	Massachusetts
Richard Strauss	8271	November 20, 1975	New York
Misoon Y. Chun	8300	December 19, 1975	Nevada
Kenneth C. Davis	8301	December 19, 1975	Louisiana
Bernard Koenig	8302	December 19, 1975	Utah
Gary M. Oderda	8303	December 19, 1975	Utah
Irene O. Nowosiwsky	8306	January 5, 1976	Pennsylvania

The following table shows the number of pharmacists granted registration by reciprocity and the number who were certified to register by reciprocity in other states during the past ten years.

Fiscal Year	Reciprocity	Certified for Registration in Other States
1966-1967	61	27
1967-1968	64	20
1968-1969	84	27
1969-1970	75	40
1970-1971	92	26
1971-1972	67	35
1972-1973	94	57
1973-1974	88	63
1974-1975	76	45
1975-1976	50	49
Total	751	389

This table shows that Maryland gained 362 pharmacists by reciprocity during the past ten years.

Pharmacy Permits

Location	1974-75	1975-76
Counties:		
Allegany	26	24
Anne Arundel	54	58
Baltimore	152	157
Calvert	3	3
Caroline	3	3
Carroll	15	17
Cecil	8	7
Charles	8	7
Dorchester	5	6
Frederick	16	17
Garrett	5	5
Harford	26	26
Howard	15	17
Kent	4	4
Montgomery	100	103
Prince George's	105	106
Queen Anne's	4	4
Saint Mary's	6	6
Somerset	4	5
Talbot	7	6
Washington	19	21
Wicomico	13	13
Worcester	9	11
County Totals	607	626
Baltimore City	189	191
State-wide Totals	796	817

The above figures include permits issued to hospitals in the counties as follows in the next column.

Allegany	3
Anne Arundel	3
Baltimore	10
Calvert	1
Carroll	3
Cecil	1
Charles	1
Dorchester	1
Frederick	1
Garrett	1
Harford	2
Howard	2
Kent	1
Montgomery	6
Prince Georges	3
St. Mary's	1
Somerset	1
Washington	1
Wicomico	2
Baltimore City	26
Total Hospital Pharmacies	70

The following table shows the number of pharmacies opened, changes in ownership and closed during the year:

	Opened	Changes in Ownership Corporation, and/or Address	Closed
Counties	17	9	5
Baltimore City	8	8	8
Total	25	17	13

The following table shows the number of pharmacies opened, changes in ownership, etc. and closed in the past ten years:

Fiscal Year	Opened	Changes	Closed
1966-1967	41	27	25
1967-1968	24	37	35
1968-1969	34	19	51
1969-1970	20	21	19
1970-1971	24	28	40
1971-1972	27	11	21
1972-1973	25	41	29
1973-1974	34	30	21
1974-1975	44	18	25
1975-1976	25	17	13

Certificate Of Registration Renewals

The following table shows the renewal periods and the total renewals to date:

Renewal Period	Total Renewals
1961-1962	2,368
1963-1964	2,425
1965-1966	2,663
1967-1968	2,762
1969-1970	2,900
1971-1972	3,084
1973-1974	3,342
1975-1976	3,480

Manufacturers' Permits

Permits to manufacture drugs, medicines, toilet articles, dentifrices or cosmetics during 1976 were issued to 31 firms. An applicant applying for a permit for a newly established company is required to appear before the Board and to furnish all information the Board considers pertinent to the conducting of such operation.

Dangerous Drug Distributors' Permits

The Board issued 105 permits to sell, distribute, give or in any way dispose of dangerous drugs during 1976. It is not necessary for a subsidiary or subsidiaries of a company to have a separate permit, as they are covered under the permit held by the parent company.

Legislation

The following legislation which affects the profession of Pharmacy either directly or indirectly was enacted by the 1976 Maryland General Assembly and signed into law by Governor Marvin Mandel.

House Bill 596

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND. That Sections 257 and 258 of Article 43 Health, of the Annotated Code of Maryland (1971 Replacement Volume and 1975 Supplement) be and they are hereby repealed and reenacted, with amendments to read as follows:

Article 43 — Health

(A) THERE IS A Maryland Board of Pharmacy, which IS part of the Department of Health and Mental Hygiene.

(B) (1) THE BOARD CONSISTS OF SEVEN MEMBERS KNOWN AS COMMISSIONERS OF PHARMACY.

(2) OF THE SEVEN Commissioners SIX shall be skilled and competent pharmacists, who have had at least five years' active pharmaceutical experience in compounding and dispensing physicians' prescriptions, and of whom at least FIVE are actively engaged in the practice of pharmacy; AND ONE SHALL BE A CONSUMER.

(3) None of THE Commissioners shall be connected with any school of pharmacy either as teacher, instructor, or member of the board of trustees.

(4) Two Commissioners shall be residents of the City of Baltimore, two SHALL BE residents of the counties of the State, and THREE MAY BE RESIDENTS of either the City of Baltimore or the counties of the State.

(C) The Commissioners shall serve ON THE Board for A term of five years.

(D) (1) EACH PROFESSIONAL MEMBER OF THE BOARD SHALL BE APPOINTED BY the Governor, ON recommendation of the Secretary of Health and Mental Hygiene, from a list of pharmacists of three times the number of vacancies to be filled, submitted by the Maryland Pharmaceutical Association.

(2) EACH CONSUMER MEMBER OF THE BOARD SHALL BE APPOINTED BY THE GOVERNOR, ON RECOMMENDATION OF THE SECRETARY OF HEALTH AND MENTAL HYGIENE.

(E) AFTER notification of HIS appointment each COMMISSIONER SHALL subscribe to the oath prescribed by the Constitution of the State of Maryland.

258.

(A) THE Board shall ELECT FROM AMONG THE SIX PROFESSIONAL MEMBERS a president, secretary and treasurer, who shall serve for the term of one year and who shall perform the duties prescribed by the Board.

(B) Meetings for the examinations of applicants for registration shall be held on the first Thursday in April and October in each year, in the City of Baltimore, or at THE times and places fixed by the Board. HOWEVER, ten days' public notice of the hour and place of each meeting at which there is an examination of candidates for registration shall be given.

(C) It shall be the duty of the Board to:

(1) RECEIVE all APPLICATIONS for examination and registration submitted in proper form AND grant certificates to persons entitled to LICENSURE UNDER THIS SUBTITLE:

(2) REPORT annually to the Governor, the Secretary of Health and Mental Hygiene, and the Maryland Pharmaceutical Association upon the condition of pharmacy in the State, which report shall also furnish a record of the proceedings of the Board, as well as the names of all persons registered under these provisions; AND

(3) KEEP a book in which shall be registered the names and places of business of all persons UNDER THIS SUBTITLE and all facts pertaining to the granting of certificates.

(D) The Board shall have the power to:

(1) ADOPT any rules and bylaws necessary to the transaction of the business of the Board; AND

(2) DEMAND and receive from applicants the fees provided FOR IN THIS SUBTITLE which the treasurer of the Board SHALL PAY OVER to the Treasurer of the State.

(E) The Board may promulgate rules and regulations, in accordance with the Administrative Procedure Act, governing the standards of practice of pharmacy and operation of pharmacies including, rules and regulations governing the method of advertising, promotion and standards for filling and FOR refilling prescriptions, necessary to protect public health, safety, and welfare.

SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 1976.

Cooperative Activities

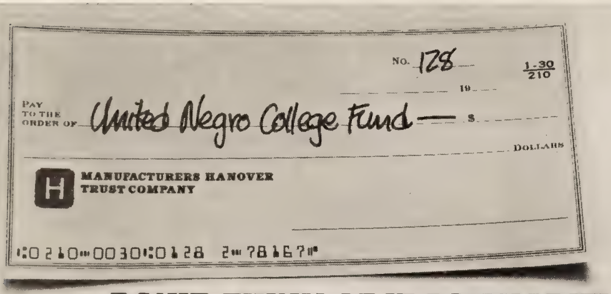
The Board maintained membership in the National Association of Boards of Pharmacy. The annual meeting of the Association was held in Lake Buena Vista, Florida May 15–19, 1976. The Board was represented by President Morris R. Yaffe, Commissioner Ralph Quarles and Secretary Robert E. Snyder.

The Board also maintained membership in the Conference of Boards and Colleges of Pharmacy of the National Association of Boards of Pharmacy, District Number Two, comprising the states of New York, New Jersey, Pennsylvania, Delaware, Maryland, the District of Columbia, Virginia and West Virginia. The annual meeting was held in Annapolis, Maryland on October 30 — November 1, 1975. The Board was represented by President Morris R. Yaffe, Mr. Charles H. Tregoe.

The Board maintained cooperative activities with the State Department of Health and Mental Hygiene, the School of Pharmacy — University of Maryland, the Maryland Pharmaceutical Association, the Baltimore Metropolitan Pharmaceutical Association, the Food and Drug Administration, City, County and State Police.

Finances

All funds of the Board of Pharmacy are deposited to the credit of the Treasurer of the State of Maryland and disbursements covering the expenses of the Board are paid by voucher by the State Comptroller.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Report of the Maryland Board of Pharmacy

List of Deceased Pharmacists

Morton Arbanel
Aaron Abramson
Israel Baker
Joseph Belford
George Black
Charlotte Bosch Schollech
Sister Mary Carmel Clarke
Benjamin Chester Cwalina
Michael Dausch
Harold T. Derry
Frank Dingus
Sidney Herbert Flom
Samuel Lewis Fox
Harry Joel Goldberg
Sylvan Goodman
Ernest Helgert
George Karman
Maxwell Alvin Krucoff
Irvin Kemick
Frank Ferdinand Levay
Norman J. Levin
Benedict Casimir Malinowski
Keith L. Morrish
Jerome Pinerman
Gifford Le Grand Potts
Dexter Reinmann
Raymond C. Robinson
Demitrious Rodriguez
Elbert William Schotta
Morris Shenker
Isidore Irvin Small (ovitz)
Jerome Snyder
Simon Solomon
Isaac Standiford
Edward Charles Vojik
Raphael Hyman Wagner
William Weltner

Respectfully submitted,

Robert E. Snyder, Secretary
Maryland Board of Pharmacy

WHAT IS ASTRO????

"OUR" – "YOUR"
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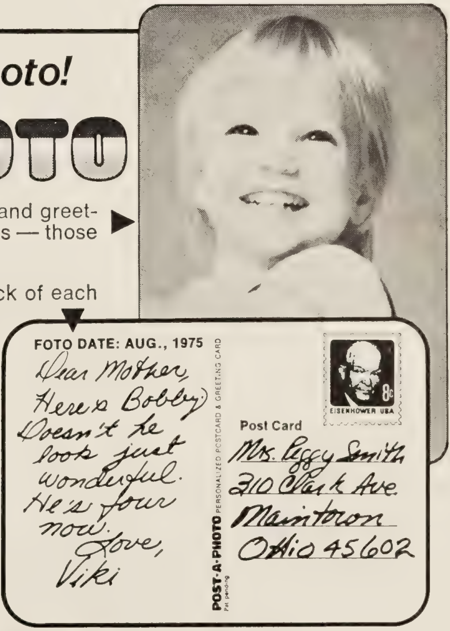

FOTO DATE: AUG., 1975

Dear Mother,
Here's Bobby
Doesn't he
look just
wonderful.
He's four
now.
Love,
Viki

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OPEN FORUM

One of the most important aspects of the community pharmacist's practice is the renewal of medications. Certain classes of medications are regulated as to the number of refills within a given period of time. Most pharmacists agree that the 6 months or 5 refills for abused medication has made the pharmacist-patient relationships concerning the renewal of these medications easier to deal with. Rules or guidelines concerning renewing of other classes of medications might also be helpful.

Since the physician's writing habits directly affect the pharmacist, we should be especially scrutinizing of those habits and guide them to our mutual benefit. Too many physicians write prescriptions with no indications of refills. Some physicians write one refill and have the pharmacist call the next 5 or 10 times for further renewals.The telephone exercise is time consuming and in over 99% of the requests which I have surveyed the answer was "Yes" — refill the medications. If the answer is yes, why didn't the physician say so when he wrote the original prescription? Is it a game they play with the valuable time of the pharmacist and patient? The folly of this situation is that most of the refill information is conveyed by an office employee — not the physician. One office worker told me that she could not refill this prescription because it was not on the drug list that the physician composed with instructions to her for refills. Pharmacists are spending a large part of their productive time talking to office employees who generally can't even spell the renewal request. It is time for a set of refill guidelines as follows:

1. Prescriptions with the exception of Class II medications that do not advise the pharmacist as to whether or not refills are indicated, would be refillable 3 times within 3 months.

2. If a prescription indicates no refills or has been refilled the number of times indicated then the patient would be required to establish the medical need to continue the prescribed medication. No longer would the pharmacist solicit physicians for the renewal of medications. The pharmacist would only call the physician after the patient has discussed his need for a renewal and been advised to continue the medication. The pharmacist's duty would be to confirm and not solicit renewals. The present method is a waste of everyone's time and effort. Patients request pharmacists to refill prescriptions that are years old. The pharmacist then becomes the patient's solicitor of the physician who in many instances has not seen the patient in two years and refuses the refill. The physician who refuses to designate refills on the prescription but refills the medication each time the pharmacist calls should be required to speak to the patient before the pharmacist could refill the prescription. The physician might then be inclined to think ahead to the patient's future renewals since he must be contacted regularly by the patient before the pharmacist could renew the medication.

3. Certain classes of medications such as antihistamines, decongestants, or combinations thereof should be refilled according to the request of the patient and the judgment of the pharmacist for 6 months unless specifically prohibited by the physician.

4. Prescriptions should be automatically cancelled after one year from the date of filling and require the patient, not the pharmacist, to solicit the physician for renewal, and the pharmacist to confirm with the physician the continuation of the medication.

M. Neal Jacobs, R.Ph.
Belair Professional Pharmacy
7414 Laurel–Bowie Road
Bowie, Maryland

ASCP Seminar Features Drug/Nutrition Interface In The Geriatric Patient

The American Society of Consultant Pharmacists is sponsoring a seminar on "Nutritional Management of the Geriatric Patient" September 15, 1976, at the Sheraton Airport Hotel in Philadelphia. The day-long program opens with an overview of physiological and biological changes that occur with aging and influence both the general nutritional balance and the drug/nutrient synergism in medical therapy. The seminar, designed for team participation of consultant pharmacists and dieticians, will detail the drug/nutrient interface and the team approach to nutritional management of the geriatric patient.

Subjects scheduled are: drug/nutrient interactions and their implications for the pharmacist, the nurse, and the dietician; special formulations and dietary modifications for the geriatric patient and guidelines for evaluation and techniques of administration; the team approach to nutritional management and a series of case studies in the long-term care setting.

Following the lecture sessions, participants will break into workshop groups to implement the team approach to nutritional management using programmed cases which may be encountered among the institutionalized elderly.

In 1900, one of every 25 persons was over 65 years of age; in 1970, one out of ten persons was over 65; the number of persons over 75 years old has been increasing at double the rate of the total population.

For further information write: ASCP, 2300 Ninth Street, South, Suite 415, Arlington, Va. 22204.

Futeral Cited For Work With Youth

Nathaniel Futeral, owner of Gera Pharmacy in Baltimore, was the recipient of the Presidents Award of the Union of Orthodox Jewish Congregations of America for his contributions to the National Conference of Synagogue Youth.

Gilpin Reaches Record Sales And Earnings

The Henry B. Gilpin Company, drug wholesalers, announced record sales and earnings for the year 1975. Consolidated net sales rose to $72,936,137, a 14% increase over $64,090,904 for the previous year. After tax earnings increased from $527,584 in 1974 to $534,643 in 1975, or 85¢ per share. The Board of Directors declared a 5% stock dividend to stockholders.

Gilpin operates six wholesale drug distribution centers, serving thirteen states in the East, South, and Midwest. The firm also operates drugstore franchising systems, service merchandising, and surgical supply subsidiaries.

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1976 Summer Deal
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ADDED CUSTOMER BENEFIT: FREE DIMACOL® cold/cough capsules plus 15¢-off coupon for Dimacol® in deal packages of 8 oz. Robitussin® and Robitussin-DM,® and 4 oz. Robitussin-PE® and Robitussin-CF.®

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Pfipharmecs reminds the country of another hero.

Everybody knows about George, Thomas and Benjamin. And should know more about another hero—you.

So Pfipharmecs is doing something about it! On NBC's new family health-oriented radio show, "Feeling Fit" with Hugh Downs as host.

Result: Nearly 20,000,000 listeners will hear on Pfizer commercials what a vital and indispensable role pharmacists play in community health care.

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NBC Radio
"Feeling Fit"
Tuesdays and Thursdays

Hugh Downs

Prince Georges–Montgomery County Pharmaceutical Association Installation And Scholarship Fund Dinner Dance

Left to right: Louis N. Nobel, 4th Vice President; Leonard J. DeMino, 1st Vice President; Henry W. Theis, Jr., President; Robert L. Koenig, Treasurer; Paul Reznek, Secretary, and Eric Kramer, 3rd Vice President.

Edward S. Sandel, outgoing president, became Chairman of the Executive Committee.

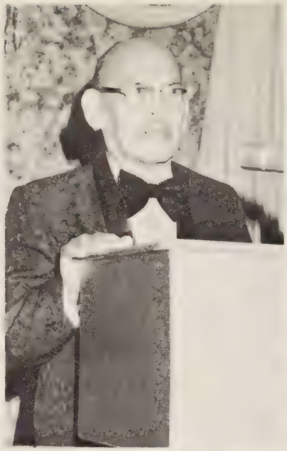
Richard D. Parker, Installation Officer

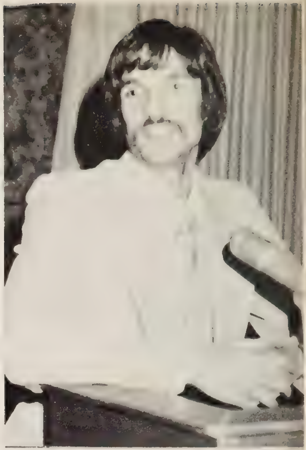
Officers and executive committee of the Prince Georges–Montgomery County Pharmaceutical Association were installed on May 23, 1976, at the Indian Spring Country Club in Silver Spring.

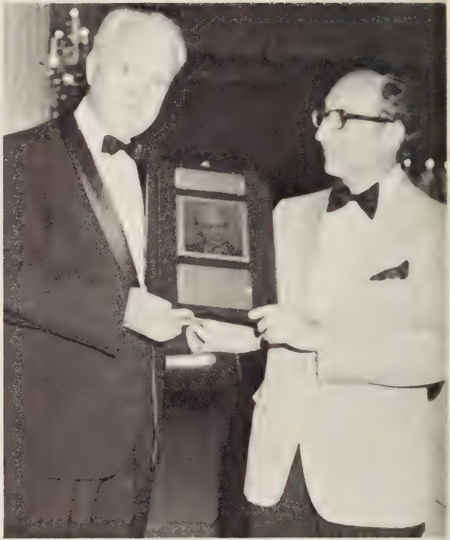
MPhA Vice President Richard D. Parker was Toastmaster and Dr. William J. Kinnard, Jr., Dean of the University of Maryland School of Pharmacy, was installation officer.

The 1976–77 officers are: Henry W. Theis, Jr., President; Leonard J. DeMino, 1st Vice President; Morton H. Katz, 2nd Vice President; Eric Kramer, 3rd Vice President; Louis N. Nobel, 4th Vice President; Paul Reznek, Secretary, and Robert L. Koenig, Treasurer. Executive Committee: Edward S. Sandel, Chairman; Stanton P. Brown, Marilyn Arkin, Deborah Arbogast, Russell A. Gobeille, Jonas Rose, Irving I. Siegel, Edward D. Nussbaum, Gerald Y. Dechter and Melvin J. Sollod. Ex-officio: Herman Bloom, Paul Gallagher, Gary McNamara and Ben S. Mulitz.

The Past President's Award to Edward S. Sandel was made by Gary McNamara of the H. B. Gilpin Company. The awards to President Theis were made by Les Lattin of the Washington Wholesale Drug Exchange and Ben Mulitz of District Wholesale Drug Corporation.







50th ANNUAL GRADUATION BANQUET

ALUMNI ASSOCIATION

UNIVERSITY OF MARYLAND SCHOOL OF PHARMACY

Eudowood Gardens — June 2, 1976

(Top row, left) Henry G. Seidman (left) is installed as president by Charles E. Spigelmire, installation officer. (Center) Past President Sam A. Goldstein delivers the invocation. (Right) Christopher L. Shawyer, President, Class of 1976, expressed appreciation on behalf of the class who were guests of the Alumni Association.

(Middle row, left) Seated left to right: Henry G. Seidman, president; Dorothy Levi and William Weiner, Executive Committee; Standing: Stephen Bierer, Executive Committee; George C. Voxakis, 2nd Vice President; Leon Weiner, Executive Committee Chairman; Herman Bloom, Honorary President; Sanford L. Rosenbloom, Executive Committee; H. Nelson Warfield, Treasurer Emeritus; Charles A. Sandler, Executive Committee; Ronald A. Sanford, Treasurer. (Right) Charles E. Spigelmire (left) received Honored Alumnus Award from Nathan I. Gruz, Executive Director, MPhA and past president of the Alumni Association.

(Bottom row, left) Alex M. Taylor, center, Class of 1976, receives first Frank J. Slama Memorial Award for excelling in extracurricular activities from Mrs. Slama and H. Nelson Warfield. (Center) George C. Voxakis delivers the benediction. (Right) Alumni Banquet Chairman Sanford L. Rosenbloom with Mrs. Rosenbloom as they greeted arrivals.

CLASS OF 1926 AT ALUMNI BANQUET

RECEIVE 50 YEAR CERTIFICATES

(Left to Right) Aaron Rosenstein, F. Harold Lewis, Jack Schneider, Bernard G. Shure, Joseph E. Sears, Harry E. Glennan, Morris Wolfe and Bernard J. Diamond.

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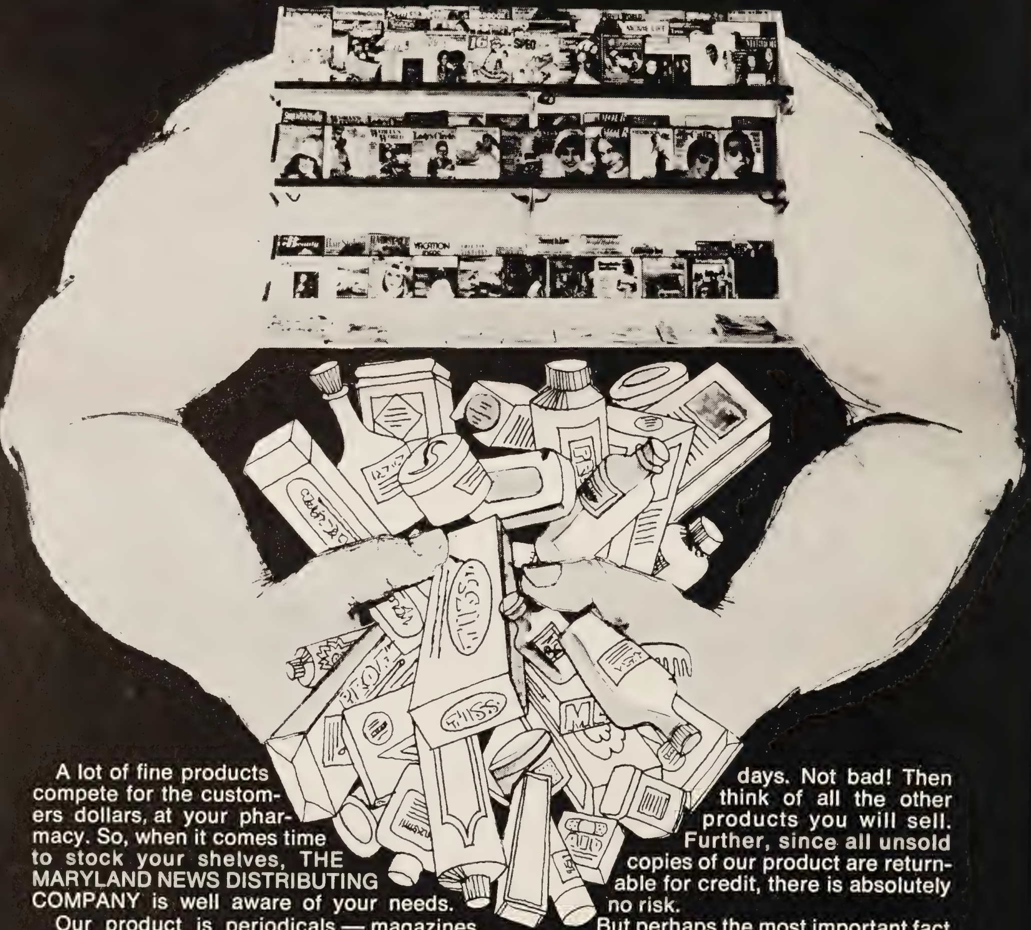

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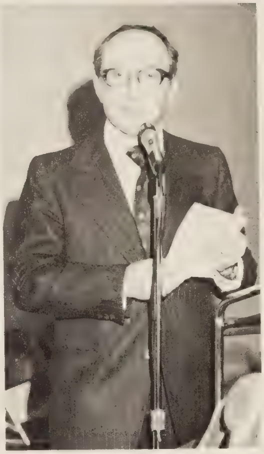
ANNE ARUNDEL COUNTY PHARMACEUTICAL ASSOCIATION

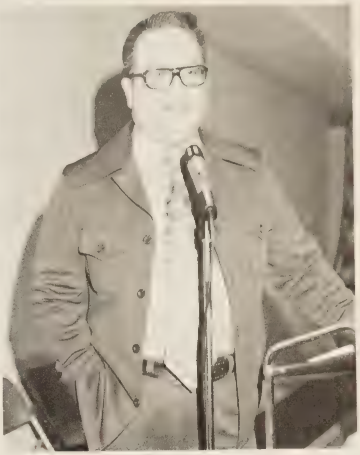
The following 1976 officers of the Anne Arundel County Pharmaceutical Association were installed at a dinner dance at Empire Towers, Severna Park.

Bennie G. Owens was presented the past president's plaque by incoming president, Nathan Schwartz of Annapolis. Vincent J. Regimenti was chairman of the installation dinner dance and toastmaster. Nathan I. Gruz, Executive Director of the Maryland Pharmaceutical Association installed the following officers: President: Nathan Swartz; 1st Vice President: Vincent J. Regimenti; 2nd Vice President: William H. Borcherding; Treasurer: Robert A. Harnish; Secretary: Roberta Van Duzer; Assistant Secretary: Albert Friedman. Executive Committee includes: Howard M. Wertheim, Albert Friedman, Alder I. Simon, Milton R. Watkowski and Bennie G. Owens.

Bennie G. Owens (left) received past president's plaque from incoming president Nathan Schwartz (right).



MPhA Executive Director Nathan I. Gruz served as Installation officer.



Installation Chairman and Toastmaster was 1st Vice President Vincent J. Regimenti.

Upper Bay Pharmaceutical Association

The Upper Bay Pharmaceutical Association announces its schedule of remaining meetings for 1976. Executive Committee meetings will be held on Tuesday, October 12, and Tuesday, December 14 at 10:15 P.M. at Dell's Pharmacy which is located at 15 W. Bel Air Ave., Aberdeen, Md. In addition, the regular meeting will now be held *monthly* at Bush River Yacht Club on the third Wednesday of each month, at 10:15 P.M.

The following members are now serving as Chairpersons of their respective committees: David H. Ayres, Legislative; Barbara C. Barron, Membership; John W. Conrad, Jr., Programs; James L. Ter Borg, By-Laws; Joseph M. Wright, Public Relations; Joseph S. Freeman, Nominating; and Charles V. Bernard, Roster and Phone Squad Communication.

The 1976 officers are: Jonas J. Yousem, President; John W. Conrad, Jr., 1st Vice President; James L. Ter Borg, 2nd Vice President; Charles V. Bernard, Secretary; Barbara C. Barron, Treasurer. Executive Committee: Joseph S. Freeman and Joseph M. Wright.

BVDA 50th Anniversary

The Baltimore Veteran Druggists Association will celebrate its Fiftieth Anniversary on Friday, September 10, 1976. This historic reunion of Associates will occur at the Victorian Room in the Broadview Apartments on 39th Street in Baltimore at 12:30 in the afternoon. As part of the program, Dr. B. F. Allen will review the "History of the Baltimore Veteran Druggists Association."

Allegany–Garrett Officers

At the May 22, 1976 meeting of the Allegany–Garrett Counties Pharmaceutical Association the following officers were elected for one year terms to expire in May of 1977: Ernest J. Gregg, Jr., President; Joseph L. House, Vice-President; and Patrick E. Trost, Secretary-Treasurer. Any correspondence to this organization should be addressed to Patrick E. Trost, 922 Dolly Terrace, LaVale, Maryland 21502.

obituaries

RAPHAEL H. WAGNER

Raphael H. Wagner, 75, a founder of the Wagner & Wagner Pharmacy on Cold Spring Lane in Baltimore, died June 6.

Mr. Wagner came to this country from his native Austria at the age of 12 and started his education at the German-English grammar school. He later graduated from Polytechnic Institute and the University of Maryland School of Pharmacy in 1923.

His first pharmacy, which he operated with his brother Manuel, was located at Baltimore and Eutaw Streets, but after three years he moved to the 500 block Cold Spring Lane in 1926. He retired in 1974, turning the business, which once had encompassed five stores, over to his son Herbert, also a pharmacist.

Mr. Wagner was a past president of the Alumni Association of the University of Maryland School of Pharmacy, and a member of Amicable Lodge A.F. &. A.M., Yedz Grotto, Scottish Rite and Shriners. He was also active in the Green Spring Synagogue Center and the Beth Tfiloh Congregation.

He is survived by his wife of 45 years, the former Rose A. Waller; three sons, Herbert C., Daniel E. and Dr. Arthur Wagner; two daughters, Mrs. Zell Hurwitz and Mrs. Maurice Feldman; and 10 grandchildren.

ALBERT FRIEDMAN

Albert Friedman, 64, for 27 years the proprietor of Onnen's Pharmacy at Sharp and Hamburg Streets, died June 20, 1976, after an illness of one year. He was a member of MPhA and BMPA.

Mr. Friedman was a graduate of City College and the University of Maryland School of Pharmacy in 1930. He was known to his South Baltimore patrons as "Doc Onion."

He was also a member of the National Association of Retail Druggists and the Beth Jacob Brotherhood.

Survivors include his wife, the former Sara Baylin; a son, Martin Friedman; two daughters, Mrs. Janice Danciker and Mrs. Marlene Friedman and two grandchildren.

EDMUND A. CORNBLATT

Edmund A. Cornblatt, 69, retired Baltimore pharmacist, died June 30. He had been a member of the MPhA and BMPA.

Born in Baltimore, Mr. Cornblatt graduated from City College in 1926 and the University of Maryland School of Pharmacy in 1929.

Throughout the 1930's and during the early 1940's, Mr. Cornblatt operated the Oliver Pharmacy, located at Bond and Oliver Streets. From 1945 until going into semi-retirement in 1967, he was a partner in the Superior Drug Company, at Washington Boulevard and DeSoto Road. During his retirement, he worked as a part-time pharmacist at the Mount Wilson State Hospital and the Crestlyn Pharmacy.

Mr. Cornblatt was a member of the Box 414 Association, the Amicable Masonic Lodge No. 25 and the Chizuk Amuno Congregation.

He is survived by his wife, the former Sarah Paul; a son, Theodore B. Cornblatt of Randallstown; one daughter, Mrs. Dorothy Ginsberg of Randallstown; two brothers, two sisters and five grandchildren.

Care Drug Centers of Washington Metro Area Launched

Nineteen independent drug stores in the metropolitan Washington-Maryland-Virginia area joined with other independents in ten states as "Care Drug Centers" under the "Care Drug Center" emblem. Capitalizing on this enhanced leverage and economy of scale, they believe they can more effectively compete for price image while maintaining the high level of personal service and lower overhead enabled by ownership/management. The group selected the Care Drug Center Services Division and Wholesale Drug Division of The Henry B. Gilpin Company in Washington.

The promotions and advertisements of the "voluntary chain" are prepared, merchandised and supplied promotional goods by the Care Drug Center Services headquarters team, led by Harrison L. Leach (Gilpin's Vice President for Retailer Services) and includes Robert Schoellhorn.

The Care Drug Center headquarters provides similar service to groups in other areas which have a combined total of approximately 150 stores.

Officers of the Care Drug Centers of Washington group are: Ivan Roop, President (Springfield Pharmacy, Virginia); Richard D. Parker, Vice President (Kensington Pharmacy, Maryland); Luke Stephens, Secretary (Dumfries Pharmacy, Virginia); Melvin Chaiet, Treasurer (Hollywood Drug, Maryland).

Early Pharmacy *Continued from page 19*

16. Ibid.
17. Ibid.
18. Reference 14.
19. Reference 9, p. 1215
20. A. R. L. Dohme, "Address at the Banquet of Alumni Association of the School of Pharmacy of the University of Maryland", *Maryland Pharmacist*, 5 (1920-30) 500.
21. David M. R. Culbreth, "Reminiscences of Early Pharmacy in Baltimore", *Journal of American Pharmaceutical Association*, 19 (1930) 285.
22. Reference 13, p. 307.
23. Reference 9, p. 1215.
24. Reference 20, p. 501.
25. Andrew G. DuMez, "Address at the Banquet of Alumni Association of the School of Pharmacy of the University of Maryland", *Maryland Pharmacist*, 5 (1929-30) 490.

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Left to right: Reed B. Peterson, R.Ph., Vice President for Domestic Pharmaceutical Marketing; Louis C. Schroeter, Ph.D., R.Ph., Vice President for Pharmaceutical Manufacturing; and Anthony J. Taraszka, Ph.D., R.Ph., Vice President for Pharmaceutical Control.

THE MARYLAND PHARMACIST

Official Journal of
The Maryland
Pharmaceutical
Association

AUGUST, 1976
VOL 52
NO 8

THIRD PARTY PROGRAMS — PRIORITIES AND STRATEGIES

An Editorial

PROCEEDINGS OF THE MPhA 94th ANNUAL CONVENTION

EPIDEMIOLOGICAL IMPLICATIONS OF PHARMACY PRACTICE

Arlene Fonaroff

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AUGUST 1976 **VOL. 52** **NO. 8**

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*Ayd, F.J., Jr. (Ed.): Int. Drug Ther. Newslett. 7(9/10):35-50 (Nov./Dec.) 1972.

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Warnings: *Usage in Pregnancy:* Safe use of imipramine during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed.

Extreme caution should be used when this drug is given to:

—patients with cardiovascular disease because of the possibility of conduction defects, arrhythmias, myocardial infarction, strokes and tachycardia;

—patients with increased intraocular pressure, history of urinary retention, or history of narrow-angle glaucoma because of the drug's anticholinergic properties;

—hyperthyroid patients or those on thyroid medication because of the possibility of cardiovascular toxicity;

—patients with a history of seizure disorder because this drug has been shown to lower the seizure threshold;

—patients receiving guanethidine or similar agents since imipramine may block the pharmacologic effects of these drugs.

Since imipramine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as operating an automobile or machinery, the patient should be cautioned accordingly.

Usage in Children: Tofranil-PM, brand of imipramine pamoate, should not be used in children of any age because of the increased potential for acute overdosage due to the high unit potency (75 mg., 100 mg., 125 mg. and 150 mg.). Each capsule contains imipramine pamoate equivalent to 75 mg., 100 mg., 125 mg. or 150 mg. imipramine hydrochloride.

Precautions: It should be kept in mind that the possibility of suicide in seriously depressed patients is inherent in the illness and may persist until significant remission occurs. Such patients should be carefully supervised during the early phase of treatment with Tofranil-PM, brand of imipramine pamoate, and may require hospitalization. Prescriptions should be written for the smallest amount feasible.

Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, Tofranil-PM, brand of imipramine pamoate, may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.

Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.

An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.

In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g., paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.

Avoid the use of preparations, such as decongestants and local anesthetics, which contain any sympathomimetic amine (e.g., adrenalin, noradrenalin), since it has been reported that tricyclic antidepressants can potentiate the effects of catecholamines.

Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.

Both elevation and lowering of blood sugar levels have been reported.

Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential, since there is limited clinical experience.

Adverse Reactions: Note: Although the listing which follows includes a few adverse reactions which have not been reported with this specific drug, the pharmacological similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when imipramine is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.

Neurological: Numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue); drug fever; cross-sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdomin cramps, black tongue.

Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation o depression of blood sugar levels.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.

Withdrawal Symptoms: Though not indicative of addiction abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.

Dosage and Administration: In adult outpatients, therapy should be initiated on a once-a-day basis with 75 mg./day. This may be increased to 150 mg./day which is the dose level which usually obtains optimum response. If necessary, dosage may be increased to 200 mg./day. Dosage should be modified as necessary by clinical response and any evidence of intolerance. Daily dosage may be given at bedtime, or in some patients in divided daily doses.

Hospitalized patients should be started on a once-a-day basis with 100-150 mg./day and may be increased to 200 mg./day. Dosage should be increased to 250-300 mg./day if there is no response after two weeks.

Following remission, maintenance medication may be required for a longer period of time at the lowest dose that will maintain remission. The usual adult maintenance dosage is 75-150 mg./day on a once-a-day basis, preferably at bedtime.

In adolescent and geriatric patients, capsules of Tofranil-PM, brand of imipramine pamoate, may be used when total daily dosage is established at 75 mg. or higher. It is generally unnecessary to exceed 100 mg./day in these patients. This dosage may be given once a day at bedtime or, if needed, in divided daily doses.

How Supplied: Tofranil-PM, brand of imipramine pamoate: Capsules of 75, 100, 125 and 150 mg. (Each capsule contains imipramine pamoate equivalent to 75, 100, 125 or 150 mg. of imipramine hydrochloride.)
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editorial

Third Party Programs — Priorities and Strategies

Prescription insurance or third party programs play a crucial role in the professional and economic aspects of pharmacy practice and management. Medicaid covers approximately 10% of the total population and this percentage holds true in Maryland. For many pharmacies Medicaid prescriptions constitute the major portion of their pharmacy service. A total of 25 to 50% total third party practice — governmental and non-governmental — already prevails for most pharmacies today, at least in the independent pharmacy sector.

Obviously, then, the rules and regulations and remuneration of any major third party program will influence the policies of the others. If pharmacists are willing to accept certain conditions and compensation from one third party program, they cannot expect another program — whether Medicaid or a private — to grant more favorable policies or more "equitable" fees.

Pharmacists and the management of pharmacies must face these facts and make their decisions as to which programs they can participate in without cutting their own economic and professional throats in regard to obtaining equitable policies as to the basis of cost of drugs and as to fee schedules.

Pharmacy cannot expect its state and national associations to fight effectively for improved policies and methods of compensation for Medicaid or some private plans when so many in pharmacy find it possible, or even competitively necessary, to charge the general public substantially less for their services.

Those who would use the profession of pharmacy as a loss leader to entice customers to buy their high profit front merchandise, such as sundries, hardware and clothing to name a few lines, cannot expect to be subsidized at higher fees for Medicaid or other plans. At the same time, of course, there should be an administrative fee included for the additional expense in the dispensing, use of forms, massive record keeping and long outstanding accounts receivable involved in third party prescriptions.

What Are The Priorities In Achieving Equitable Policies And Compensation For Professional Pharmaceutical Services?

1. Professional services must be delineated through the development and adoption of Standards of Practice. *MPhA is deeply involved in this process right now.*

2. Pharmacy services in accordance with Standards of Practice adopted by the profession must be recognized by the public and especially by decision makers as an absolute necessity for comprehensive, effective and economical health care. *This can result from a planned educational and public relations process by all elements of the profession sparkplugged by MPhA.*

3. Both the general public as well as third party programs will allocate their funds accordingly, if they perceive that patient oriented ("clinical") pharmacy services are an integral part of health care. *The goal must be the perception of an equation in health care that cannot balance out without the kind of pharmacy suggested here, with the accompanying public and private budgeting required for implementation.*

The use of pharmacy or a "pharmacy department" as a promotional gimmick or tool to create and sustain customer traffic for "front merchandise" would not be able to continue if in conflict with the standards of practice characterized by personalized, patient oriented pharmacy. At the same time, the realities of financing health care dictate the use of the latest knowledge and techniques in dispensing, management, equipment, electric data processing and use of different kinds of ancillary personnel to assist the pharmacist.

Support of efforts organized through MPhA for a sophisticated strategy, intelligent planning, socioeconomic research, legislative representation, advocacy before government and private agencies and political action — is needed to provide the muscle to advance the legitimate aspirations of pharmacists.

Nathan I. Gruz

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calendar

November 4 (Thursday) — MPhA Simon Solomon Pharmacy Economics Seminar, Quality Inn, Towson

November 17 (Wednesday) — Upper Bay Pharmaceutical Association Meeting

November 18 (Thursday) — Baltimore Metropolitan Pharmaceutical Association Annual Meeting

November 18 (Thursday) — First Balassone Memorial Lecture

November 21 (Sunday) — Pharmacy Bicentennial Dinner-Dance, Martin's West, Baltimore Beltway at Security Blvd.

1977

January 14–21 — MPhA Seminar and Tour — Acapulco and Mexico City

March 5–13 — MPhA Trip to Vail, Colorado

April 14 (Thursday) — MPhA Spring Regional and House of Delegates Meeting

May 15-19 — APhA Convention, New York City

maryland board of pharmacy

NEW APPOINTMENTS

Bernard B. Lachman, R.Ph., past president of the Maryland Pharmaceutical Association (1972–73), has been appointed to the Maryland Board of Pharmacy. Mr. Lachman has been active in association work for over a decade. In addition to previously being elected Vice President and President of Baltimore Metropolitan Pharmaceutical Association, Mr. Lachman has served on the Public Relations, Legislative, Health and Welfare, Budget and Finance Committees, and was President and Chairman of the Board of Trustees of Maryland Pharmaceutical Association. He has held appointments to the Pharmacy Advisory Committee to Maryland Blue Cross and to the Governor's Commission on Crime and Dangerous Drugs. Mr. Lachman was an organizer of PHARMPAC and has served on the State Medical Assistance Advisory Committee. A 1945 graduate of the University of Maryland School of Pharmacy, and recipient of the Order of the Double Star from AZO Pharmaceutical Fraternity, he operates a community pharmacy in partnership with his brother, Marc Lachman.

Bernard Lachman, a native of Baltimore, resides in Pikesville with his wife Selma. They have three children.

Estelle G. Cohen, M.S., of Baltimore has been appointed to the consumer position on the Maryland Board of Pharmacy. Being the first to fill such a position, she brings much experience in the field of consumer economics. Mrs. Cohen is a graduate of the College of Notre Dame of Maryland, and received her Master's Degree in Economics from the University of Maryland in 1972. She co-chaired the conference for consumer specialists given by the Federal Executive Board and the Consumer Crunch Conference hosted by Notre Dame College a part of a grant given to Dundalk Community College. Mrs Cohen has been instrumental in acquiring numerous state and federal grants for Notre Dame, among them a Carnegie Grant to implement the Consumer Economics Program she helped design. This expertise has made Mrs. Cohen a much sought after guest lecturer, speaking at the National Democratic Women's Clubs of Maryland, Maryland Pharmaceutical Association and others. She is currently an Assistant Professor in Economics and Chairman of the Consumer Economics Program at the College of Notre Dame.

Mrs. Cohen and her husband Alan K. Cohen are residents of Baltimore and are the parents of 4 children.

Leonard J. DeMino, R.Ph., has been appointed to the Maryland Board of Pharmacy. He received his B.S. degree in Pharmacy in 1956 from George Washington University. Since that time he has worked for Peoples Drug Stores, Inc. in numerous capacities until 1972 when he was appointed to his current position as Director of Professional Services for Peoples. He holds membership in District of Columbia, Pennsylvania, North Carolina, Virginia and Maryland state pharmaceutical organizations and is a member of APhA and National Association of Chain Drug Stores. Mr. DeMino's involvement for pharmacy ranges from local to national. His efforts include membership on the Executive Committee of the Washington, D.C., Pharmaceutical Association, Board of Trustees of the Maryland Pharmaceutical Association, Chain Store Advisory Board of the Roche Pharmaceutical Company and the Drug and Insurance Industries Ad Hoc Committee to study third party problems.

Mr. DeMino received the A. H. Robins Bowl of Hygeia Award for Community Service in Pharmacy from the D. C. Pharmaceutical Association in 1972.

Mr. and Mrs. Leonard DeMino reside in Montgomery County with their twin fifteen-year-old son and daughter.

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CHARLES E. SPIGELMIRE
A PHARMACIST OF DISTINCTION

Remarks of Nathan I. Gruz, Executive Director of the Maryland and Baltimore Metropolitan Pharmaceutical Association, upon the presentation of the Honored Alumnus Award of the Alumni Association of the University of Maryland School of Pharmacy to Charles E. Spigelmire at the Annual Graduation Banquet, Eudowood Gardens, Baltimore — June 2, 1976.

It is my great privilege and personal pleasure to participate in a ceremony which embodies a three-fold honor.

First and second, in honoring Charles E. Spigelmire as the Honored Alumnus of 1976, the Alumni Association of the University of Maryland School of Pharmacy has honored itself. Thirdly, I feel deeply honored to have been selected by the honoree to present the honored alumnus award. I am grateful, Charles.

I would like to entitle my remarks: A Tribute To Charles E. Spigelmire — A Pharmacist of Distinction.

At rare intervals in one's personal and professional life, one may be fortunate to know and work closely with a person who makes a difference in the lives he touches — an unforgettable person.

The life record of Charles E. Spigelmire is the history of a person who has always been deeply devoted to his family, to his faith and to his profession.

He was born in Edgewood, Pennsylvania, a suburb of Pittsburgh, and is a graduate of Loyola High School in Baltimore. He received his Ph.G. in 1929 from the School of Pharmacy, University of Maryland.

Mr. Spigelmire joined his professional societies, was immediately recognized as a doer and appointed to various committees over the years. His energy, enthusiasm and leadership qualities soon resulted in his appointment as a committee chairman and officer.

He is a Baltimore pharmacist who has been Chairman of the Public Relations Committee of the Maryland Pharmaceutical Association since 1954. During these years, he has also served as Publicity Chairman for the Baltimore Metropolitan Pharmaceutical Association.

On behalf of the Maryland Pharmaceutical Association, Mr. Spigelmire for eight years conducted the "Best Neighbor" weekly television series which portrayed the professional background and activities of pharmacists. At the present time, he plans, produces and moderates MPhA's radio program, "Your Best Neighbor" on WCAO-AM and FM. He has been involved in this public service broadcast since November 22, 1959. This public relations project includes presentations on pharmacy, medicine and public health. Many prominent guests in other health fields are featured in addition to leaders in pharmacy.

Other public relations efforts of Mr. Spigelmire have been with radio stations WFBR, WITH and WBMD for both the Maryland and the Baltimore Associations. He has also been a leader in the Association programs concerned with inter-professional relations and exhibits, Diabetes Detection Week, Poison Prevention Week, National Pharmacy Week, and both the Maryland and Baltimore City Health Departments. He actively promoted the concept of pharmacies as "Health Information Centers" and espoused the installation of racks made available by the MPhA.

Mr. Spigelmire also devoted considerable effort and time to MPhA and BMPA membership committee activities and has been the sparkplug for the BMPA Annual Installation Banquet for a dozen years. He has been designated as Grand Marshal for both the MPhA, BMPA and Alumni Association for their Annual Banquets. Time after time he has been honored and has in turn honored pharmaceutical associations in response to requests to serve as Installation Officer for incoming leaders.

He finds time to give talks with slides and exhibits of drugs and chemicals to civic, PTA and fraternal groups on "Accidental Poisoning in the Home."

In recent years when the necessity for a potent political action arm to back up the efforts of the state association became apparent it was not long before good old Charlie was the treasurer for PHARMPAC — The Pharmacists Political Committee of Maryland. His dedicated efforts night and day achieved magnificent results.

As tokens of the high regard and esteem of his colleagues, Charles Spigelmire has acquired an enviable, but justly deserved, unparalleled list of distinctions.

First, for his devoted service, the Maryland Pharmaceutical Association in 1968 elected him Honorary President after he repeatedly turned down opportunities to serve as president of the state professional pharmaceutical society.

This Alumni Association elected him its Honorary President in 1969.

The Maryland Pharmaceutical Association in 1971 selected him for the Bowl of Hygeia Award for professional and community service.

This year at the Baltimore Metropolitan Pharmceutical Association Installation Dinner, he received the first Annual AID Drug Service Award in recognition of his outstanding contributions to pharmacy in Maryland.

Mr. Spigelmire is a member of both the Maryland Council and the Charles Carroll of Carrollton Fourth Degree Assembly, Knights of Columbus in Maryland. He also belongs to the Alcala Caravan of the Alhambra and the Holy Name Society.

He is a member of the American Pharmaceutical Association, the National Association of Retail Druggists and was elected a Vice President of the Maryland Academy of Medicine and Surgery.

Charles Spigelmire is married to the former Josephine Kaminski and they have three children: Charles III, with the Department of Agriculture, Bureau of Rural Electrification; Mary Jo, a nurse, married to Dr. Joseph j. Tecce, a psychologist in Boston; and Michael, a Lt. Col. in the United States Army who is on maneuvers in Germany. The Spigelmires have seven grandchildren.

Mrs. Spigelmire is equally devoted to pharmacy and has served as an officer of the Ladies Auxiliary of the MPhA (LAMPA). In all fairness, we must pay a tribute to Jo, for without her solid backing, assistance, understanding and patience, Charlie could never have achieved his remarkable record as Maryland's Pharmacist of Distinction.

(Continued on Page 19)

94th ANNUAL CONVENTION
MARYLAND PHARMACEUTICAL ASSOCIATION
SHERATON FONTAINEBLEAU INN, OCEAN CITY, MD.
JUNE 20–23, 1976

SUNDAY — JUNE 20

Registration was opened by TAMPA, the Travelers Auxiliary of the Maryland Pharmaceutical Association, at 12 noon. The first function, a cocktail party reception for all registered, was held from 9:30 P.M. to midnight with music provided by William F. Brown of Geigy.

MONDAY — JUNE 21

The opening General Session was convened by President Henry G. Seidman at 9:00 A.M. Convention Chairman Ronald Lubman outlined the convention schedule and social and recreational events. I. Earl Kerpelman, past President MPhA, was appointed parliamentarian.

President Seidman then called upon the representatives of the various affiliated and related organizations to bring greetings. The following responded: For Baltimore Metropolitan Pharmaceutical Association, Ronald Lubman, President; Allegany-Garrett County Pharmaceutical Association, Ernest Gregg, President; Eastern Shore Pharmaceutical Society, Gerald Overbeck, President, who expressed his best wishes and welcomed all to the Eastern Shore; Upper Bay Pharmaceutical Association, Charles Bernard and Student APhA-MPhA Chapter, Margi Brophy, President.

President Seidman then recognized past MPhA President Victor H. Morgenroth, Jr. as the recipient of an Honorary Doctor of Science Degree from the Massachusetts College of Pharmacy for his many contributions to the profession, including most recently, his service on the "Millis" Study Commission on Pharmacy.

Normand Pelissier, past President of the Maryland Society of Hospital Pharmacists and delegate of the MSHP, then spoke of the benefits to the profession from the scheduling of MPhA and MSHP meetings consecutively and at the same site.

President Seidman then called upon President-elect Melvin N. Rubin to take the chair. Mr. Rubin then presented President Seidman to deliver the President's address. *(The complete address of President Seidman is printed in the July issue.)*

The Chair was then returned to President Seidman who called upon Paul Freiman, Chairman of the Board of Trustees. Mr. Freiman stated that while the attendance of most of the officers and trustees was excellent there should be some provision for replacement of a Trustee for excessive absenteeism. He also recommended the amendment of the By-Laws to provide for a one year seat on the Board of Trustees for the President of the Joint SAPhA-MPhA Chapter.

Report of the Treasurer Morris Lindenbaum. The annual report prepared by the Certified Public Accountant had been previously distributed to the delegates and was accepted on motion duly made and seconded.

Report of the Executive Director Nathan I. Gruz. Mr. Gruz spoke briefly of the challenges during the past year and the response of the Association, especially in the area of legislation and Medicaid. He pointed out the necessity for each member to serve as a membership recruiter, thereby enlisting all pharmacists to carry the financial load in proper representation of pharmacy. The priority must be greater membership so that MPhA can speak for the largest possible number of pharmacists throughout the state as the representative state professional society. He urged every member to enroll at least one new member during the coming months. Mr. Gruz invited all present to submit questions about any matter. There being no questions, the report was accepted.

Report of the Board of Pharmacy — Robert E. Snyder, Secretary. Mr. Snyder presented a copy of the official report of the Board of Pharmacy for 1975–76 in accordance with Section 258 of Article 43 of the Annotated Code of Maryland. A complete report will be published in *The Maryland Pharmacist.* Mr. Snyder announced the election of Frank Block by the Board as Honorary President of the Board of Pharmacy, the appointment of Bernard B. Lachman as the new member of the Board of Pharmacy, succeeding Morris Yaffe and the election of I. Earl Kerpelman as the new President of the Board of Pharmacy for 1975–76.

Mr. Snyder reviewed the highlights of the report of the Board of Pharmacy. In a question and answer period, there was reference to the fact that there were many more hospital pharmacies licensed this year than the previous year and there was a question regarding the number of hospital pharmacies in Maryland remaining unlicensed at this time. There was also inquiry as to whether pharmacies in HMOs were considered community or hospital pharmacies.

Report of Legal Counsel Joseph S. Kaufman. Mr. Kaufman spoke of the main provisions and effects of the U. S. Supreme Court decision on prescription price advertising which was issued May 24, 1976. He also spoke of the court decision involving the Portland Retail Druggists Association on the issue of differential prices charged by manufacturers to non-profit institutions such as hospitals. Mr. Kaufman also referred to the case of pharmacists in the District of Columbia involved in improper dispensing of controlled dangerous substances. There was discussion regarding the Federal Trade Commission's attitude in not vigorously upholding the Robinson-Patman Act. The problem of physician violations of drug enforcement registration was also brought up.

School of Pharmacy Report — Dr. Dean Leavitt, delegate from the School of Pharmacy, spoke briefly of the establishment of a pharmacist placement service at the school. The matter of the School of Pharmacy Task Force on the professional program was brought up. The need for further opportunities for input from the Maryland Pharmaceutical Association on behalf of the practitioners was emphasized. The opening General Session was concluded and recessed until 9:00 A.M. Tuesday.

HOUSE OF DELEGATES

Speaker Kamenetz convened the first session of delegates at 10:45 A.M. Secretary Nathan I. Gruz announced a quorum of the House was present. The Speaker appointed I. Earl Kerpelman as parliamentarian of the House. He then called for committee and other reports.

1. Finance Committee — Stanley J. Yaffe, Chairman. The Committee met several times during the past year to review the financial status of the Association and develop the budget for 1976. For 1975, income was $72,697 ($73,200 had been projected in the budget) and expenses were $71,080 ($70,000 had been budgeted). The budget for 1976 had been set as $77,500 with expenses the same. So far this year expenses are going as anticipated, but revenues will fall short. Although dues collections are in advance of the same time last year, 1977 dues income which is received in November and December of this year will have to be drawn upon again.

   The Convention should produce in contributions and fees the anticipated income, but our trip income for 1976 will be lower than projected. The employment of an assistant for *The Maryland Pharmacist* is an added expense, but bringing the publication to a current basis will still not give us the full amount that was budgeted. Printing costs, all overhead and postage are rising expenses.

   The Committee is working on all possible revenue sources, but the major source is and must be from membership dues. To meet our budgetary needs the Board of Trustees approved the following Committee recommendation for 1977: Pharmacist dues — from $40 to $50.00; Owner's pharmacy fee — from $60.00 to $70.00. Thus the owner will pay $120 MPhA dues in 1977. Increased membership and dues income is a must. I would like to thank all of the committee members for their help in planning.

   Because of the need for more money in the Kelly Fund following renovation of the building $2.00 earmarked for the Kelly Fund should be added to dues.

   Mr. Yaffe moved for the addition of $2.00 to the 1977 dues for one year only for allocation to the Kelly Memorial Fund only. Seconded by Mr. Parker and passed.

2. Public Relations Committee — Charles E. Spigelmire, Chairman. A comprehensive report of public relations activities for the year was presented.

   The reports of the Finance and Public Relations Committees were accepted.

3. Legislative Committee — Richard Parker, Chairman. A review of the activity of the Legislative Committee since the last Annual Convention covers many important areas of concern to pharmacists. Among these are Continuing Education, Drug Product Selection, Patient Medication Profiles, Prescription Price Advertising, Board of Pharmacy composition and regulations and other issues of local or allied group importance.

   Your Association worked actively with the legislature in preparing bills which would be favorable to the good practice of pharmacy and campaigned extensively against those which were unwise or detrimental to the profession. We have gained recognition as a force to be considered in all such legislation and have the attentive ear of many delegations. Your Committee has worked with Delegate Torrey Brown on such important national concerns as Drug Product Selection and Mandatory Continuing Education. As you know, these bills were not passed in the 1976 General Assembly, but are still being considered for the next Assembly as critical legislation. In the area of Mandatory Patient Medication Profiles, our influence was felt to the extent that Delegate Timothy Hickman contacted the Chairman of the Board of Trustees for input into his proposed legislation. Delegate Hickman was invited to our Regional Meeting and made a presentation which was so convincing of his dedication to this bill, that MPhA House of Delegates voted to support his bill. The bill subsequently was defeated in favor of the Board of Pharmacy implementing regulations which would establish the maintenance of medication profiles as a standard of practice.

   It is worthwhile to note at this point that the Committee on Standards of Practice has drafted a proposal of standards for patient profiles which was approved by the Board of Trustees. This committee has been very active and has recommended the establishment by the Maryland Pharmaceutical Association of standards for credits to be issued for Continuing Education and issuance of certificate for satisfactory completion of requirements. This procedure would enable the adoption of standards acceptable to the Board of Pharmacy in the event legislation is not forthcoming to require certification.

   Legislation which has a direct impact on pharmacy failed in most cases to pass in this session. The most significant of those which were enacted into law is the change in composition of the Board of Pharmacy. HB 596 will increase the membership of the Board by two members. One of these will be a pharmacist and the other will be a public (consumer) member. Of the bills which we were successful in defeating, the ones affecting price advertising and establishing a Board of Certification of Orthotists and Prosthetists were the most important. Since the General Assembly session however, the Supreme Court has invalidated restrictions on price advertising of prescription drugs and it most certainly casts doubt on Maryland's restrictions. We will also will be faced with a renewed attempt to establish a Board of Certification of Orthotists and Prostetists in the next session, since this was referred to Legislative Council for study. For a more comprehensive report on legislative action for the past year, I refer you to the Newsletter of the Maryland Pharmaceutical Association which President-elect Melvin Rubin so capably handles. The April 1976 issue contains a summary of bills affecting the profession.

   In looking to the future, the Legislative Committee welcomes the support and advice of all members. We plan to continue working for Drug Product Selection, Continuing Education, "Freedom of Choice" in HMO plans, funding for the Board of Pharmacy and the professional image of pharmacy. It is apparent from the ruling of Chief Justice Warren Burger that the professional status of pharmacy will only be established when we can clearly demonstrate the consultant and clinical aspect which is being currently taught in our schools. Continuing Education is a necessary adjunct to that training.

The report was accepted.

4. Prescription Insurance Committee — Marvin Friedman, Chairman. Mr. Friedman gave a brief outline and stated that the full report which was distributed in the delegates' kits would be considered at the Tuesday session of the House. He thanked the committee members for their assistance and contributions.

5. Membership Committee — Elwin Alpern, Chairman. Mr. Alpern presented a written report. During 1975–76 the Committee met several times to plan and carry out a membership campaign. A $76 dues was set up on a one-time basis for new members (reinstatements were not eligible). A goal of 200 members was set for the Bicentennial Year. Over 80 new members have been enrolled so far this year.

At the end of 1975, we had 755 members. So far this year, we have 726 dues paid compared to 630 the same time last year (1975) and 570 in 1974.

We began a drive to get each local to work on their area. This effort must be intensified. We hope that the number of hospital pharmacists will continue to increase. The number of pledges (graduates) and other pharmacists who have graduated in the past 5 years has continued to grow. At the end of 1975, we had 98 pledges. Today we already have 105.

We hope to redouble our efforts to organize local membership committees and to get every possible pharmacist — employee, hospital, chain, independent, faculty, government or whatever, to enroll. If every member will get just *one* new member between now and December, we will solve many of our organizational and financial problems.

I would like to thank all the members of my committee. My personal thanks to Charlie Spigelmire for his usual fantastic efforts in our behalf. Any questions? Any suggestions, please feel free to see me.

The report was accepted.

6. Newsletter Committee — Melvin Rubin, Chairman. The Newsletter has grown in stature, acceptance and appearance in the past year and can now be considered as one of the advantages of membership in MPhA. It has been used as recruitment tool. Thanks again go to Mr. Nathan Gruz for the editing and Ms. Carol Yarsky for her work on typing and format.

An area which still needs improvement is in reporting local association work. Local news brought to the staff's attention by the 20th of the month is used whenever possible. Use the Newsletter for additional notice of meetings and to inform other members of activities.

7. Pharmacy Practices Committee — Melvin N. Rubin, Chairman. The House of Delegates approved our position on "Pharmacist Responsibility and Reserved for Pharmacist

(Continued on Page 17)

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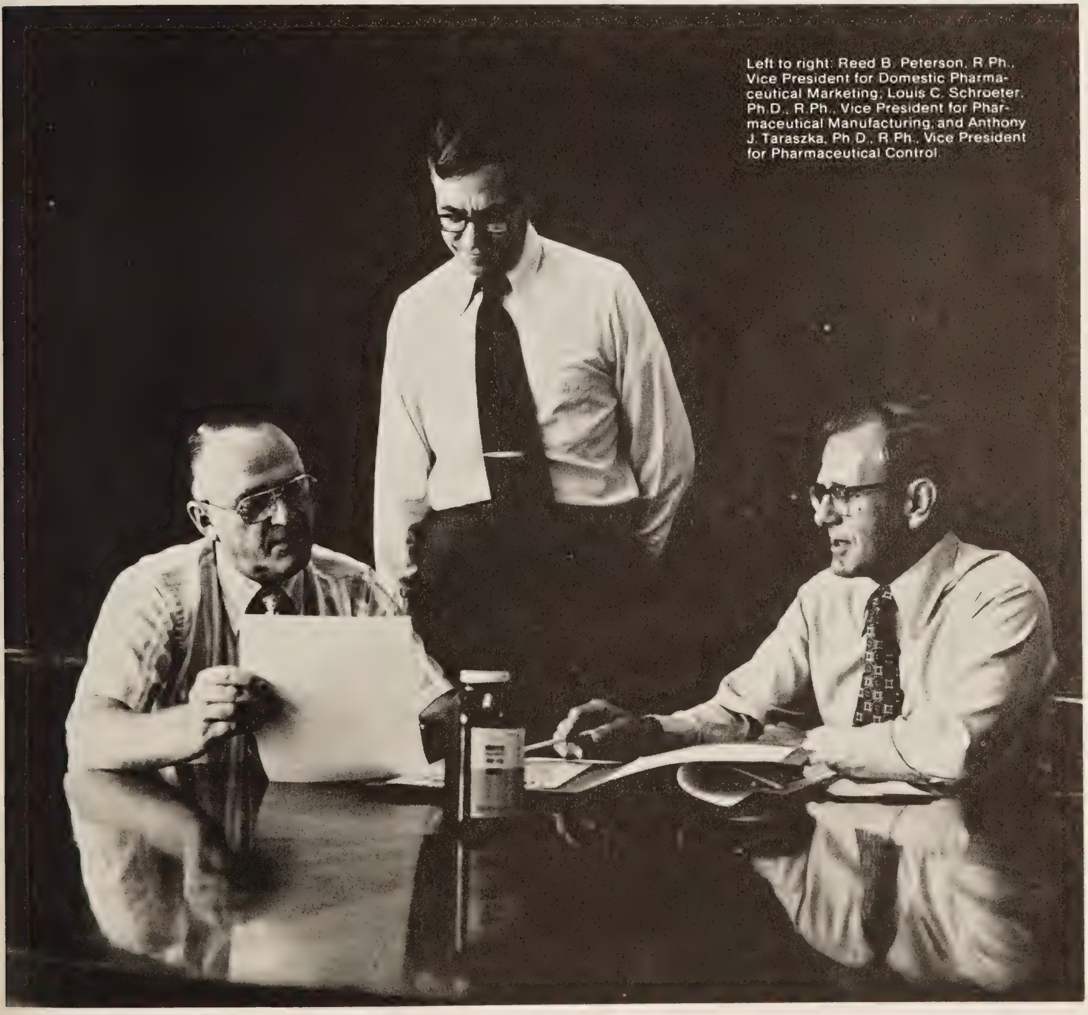

Left to right: Reed B. Peterson, R.Ph., Vice President for Domestic Pharmaceutical Marketing; Louis C. Schroeter, Ph.D., R.Ph., Vice President for Pharmaceutical Manufacturing; and Anthony J. Taraszka, Ph.D., R.Ph., Vice President for Pharmaceutical Control.

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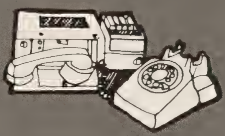

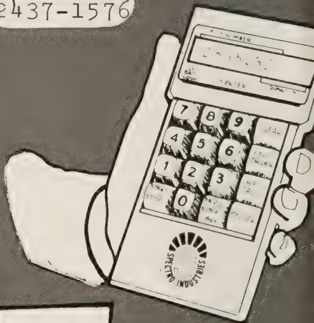

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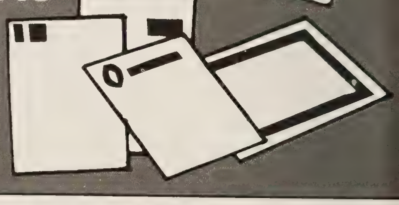

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Only", proposed Pharmacist-in-Charge regulations, and a mechanism to allow pharmacists to transmit copies of prescriptions to another pharmacist. These areas are still being considered by the State Board of Pharmacy for enabling regulations. The Board of Trustees approved an MPhA policy of Patient Medication Profiles.

The Committee began consideration of standards for certification of pharmacists who have attained proper total of continuing education credits on a voluntary basis and standards for certification of pharmacies who have proven that they maintain and utilize patient profiles.

Since these two projects represent policy decisions with a great potential for affecting the standard of practice of the profession, approval is being requested of the House of Delegates at this Convention.

Upon motion of Mr. Rubin, duly seconded, the report was approved.

8. Convention & Trips — Ronald Lubman, Chairman. Mr. Lubman announced plans for various forthcoming trips including the NARD Convention in San Francisco in September and a trip to Mexico in January. Arrangements are also being worked on in connection with the APhA Convention in New York in April. He announced a fund raising affair on July 22 at the Burn Brae Dinner Theater on behalf of PHARMPAC.
9. Peer Review Committee — Irvin Kamenetz, Chairman. Peer Review Committee Annual Report.

The first session of the House of Delegates adjourned at 12:30 P.M.

MPhA, TAMPA and LAMPA members then joined attendance at the convention bicentennial feature, "The Apothecary and the Practice of Medicine in Colonial Times" — Lecture and slide presentation by Morris L. Cooper, Curator MPhA Cole Pharmacy Museum. A most informative and enlightening program presented in an excellent manner was enjoyed by all.

Adjournment was at 1:30 P.M.

At 6:30 P.M. all members of MPhA, TAMPA, LAMPA and their guests gathered for a crab feast at the Berlin Fire Hall. The evening was concluded with a square dance sponsored by TAMPA.

Tuesday Morning at 8:00 A.M. a breakfast was sponsored by Maryland members of the American College of Apothecaries chaired by Joseph U. Dorsch. Speakers included: A.C.A. fellows Nathan I. Gruz and Victor H. Morgenroth, Jr. The objectives, history and services of ACA were outlined. The many contributions of ACA to professional progress were presented and membership brochures distributed. There is a joint Maryland-Virginia Chapter of ACA. It is planned to continue the breakfast as an annual event at the MPhA convention.

TUESDAY — JUNE 22

Second General Session was convened at 9:00 A.M. by President Seidman who recognized Donald O. Fedder, past President of MPhA, who has been designated Chairman of the Board of Trustees of the American Pharmaceutical Association for 1976–77.

Memorial Service — The memorial prayer was ready by Gerald Overbeck of Salisbury. The Necrology was then read by Robert E. Snyder of Baltimore, MPhA Trustee and Secretary of the Board of Pharmacy.

Morton Arbanel
Aaron Abramson
Israel Baker
Joseph Belford
George Black
Charlotte Bosch Schollech
Sister Mary Carmel Clarke
Benjamin Chester Cwalina
Michael Dausch
Harold T. Derry
Frank Dingus
Sidney Herbert Flom
Samuel Lewis Fox
Harry Joel Goldberg
Sylvan Goodman
Ernest Helgert
George Karman
Maxwell Alvin Krucoff
Irvin Kemick
Frank Ferdinand Levay
Norman J. Levin
Benedict Casimir Malinowski
Keith L. Morrish
Jerome Pinerman
Gifford Le Grand Potts
Dexter Reinmann
Raymond C. Robinson
Demitrious Rodriguez
Elbert William Schotta
Morris Shenker
Isidore Irvin Small (ovitz)
Jerome Snyder
Simon Solomon
Isaac Standiford
Edward Charles Vojik
Raphael Hyman Wagner
William Weltner

The service concluded with the reading of Psalm 23 by Nathaniel Futeral of Baltimore.

The House of Delegates then convened its Final Session with Speaker Kamenitz presiding.

Secretary Gruz announced that Delegate Carter Hickman of Worcester County, where Ocean City is located, was the only Eastern Shore legislator present at the crab feast the previous evening. While many legislators expressed a deep appreciation for our invitation, prior commitments prevented their attending.

The minutes of the regional meeting of April 29, 1976 previously distributed in the delegates' kits were approved with the following corrections. Under New Business, the motion to table was made by SAPhA delegate Bonnie Levin and Item #11 was tabled due to lack of quorum.

Prescription Insurance Committee — Marvin Friedman, Chairman. The comprehensive report with attached table outlining the provisions of various third party programs was reviewed. A memorandum from James C. Eshelman, Director of the Medical Assistance Policy Administration, dated June 7, 1976 on proposed pharmacy regulations was received at the Association office on June 18 and was included in the delegates' kits. Mr. Friedman reviewed the regulations and the memo of Mr. Eshelman. There were questions regarding the validity of the interpretations of the regulations included in the memo. The report was approved, but as the SAPhA-MPhA delegates indicated objection to the reference to HMOs on page 3 of the report, the following motion was then made: Mr. Friedman moved for an addendum reflecting the view of SAPhA to emphasize the professional factors of pharmacy services and patient care.

UNFINISHED BUSINESS

1A. Health Maintenance Organizations — The motion of Donald Schumer at the Spring Regional Meeting on the subject of HMOs was broken into two parts. Mr. Schumer moved first that MPhA support a "freedom of choice" of pharmacy policy for HMOs and for the enforcement of "freedom of choice" of outside pharmaceutical services providers for HMOs. Seconded and passed.

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now.
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1B. Mr. Schumer then moved that MPhA supports and works toward a program whereby the state would be responsible for direct payment to pharmacies for services provided in good faith for patients of HMOs.

2. Liquor Licenses in Pharmacies — Motion tabled from Spring Regional Meeting: "In order to raise the professional image of pharmacy, MPhA go on record as opposing the issuance of new alcoholic beverage licenses in pharmacies in the State of Maryland. The Association shall not oppose the renewal of nor the transfer of licenses that are now in effect." Delegates from SAPhA-MPhA Chapter asserted that MPhA should take a stand against all liquor sales in pharmacies. The original motion did not receive a majority and failed.

3. Paid Prescription Audits — Item #11 from Spring Regional Meeting Minutes. Mr. Rubin moved "that Paid Prescriptions Incorporated be contacted in connection with their audits to determine what the basis is for their action in billing their participating pharmacies for alleged differences in cost of drugs from various sources." Mr. Rubin moved for adoption of the motion. Seconded and passed.

NEW BUSINESS

1. Mr. Sandel moved for a detailed agenda to be mailed thirty days prior to the annual and regional meetings. Seconded and passed.
2. Mr. Freiman moved for commendation of the following members of the MPhA Committee on Medicaid for their outstanding report: Marvin Friedman, Chairman; Melvin Rubin, Ron Sanford and Gerald Freedenberg.
3. A proposal by Donald Schumer for a campaign to enroll representatives of manufacturers and suppliers as associate members was referred to the Industry Relations Committee.
4. On behalf of the BMPA, its President Ronald Lubman moved that the State Board of Pharmacy be urged to take all appropriate steps for enforcement of the law requiring legible physician names and dating on prescriptions and for monitoring use of the abbreviation of PRN. Seconded and passed.
5. Mr. Freiman moved for endorsement of an amendment of the Constitution By-Laws to add a seat on the Board of Trustees for representative of the Joint SAPhA-MPhA Chapter. Seconded and passed.
6. Mr. Morgenroth's proposal for the State Department of Health to require Rx forms to include imprinted provider numbers on prescriptions was referred to the MPhA Medicaid Committee.
7. Mr. Stanley Yaffe moved that the MPhA send a letter of commendation to the third party prescription plan which in the opinion of MPhA's Third Party Prescription Programs Committee most closely approximates the ideal plan (taking into consideration all facets of operation) and that a copy of this letter of commendation be sent to all of the other third party plans operating in the state of Maryland as an indication of the MPhA assessment of the various programs. Seconded and passed.

8. Mr. Rubin moved that the MPhA Spring Regional House of Delegates Meeting be held before the annual APhA Convention. Seconded and passed.
9. Board of Pharmacy — Immediate past President of the Board of Pharmacy Morris Yaffe gave a history of the organizational and funding problems of the Board. Division of Drug Control personnel are no longer permitted to do Board of Pharmacy work and Mr. Charles Tregoe, Chief, Division of Drug Control, has resigned as Secretary of the Board.
10. APhA and NARD relations — A proposal by Mr. Stanley Yaffe that dues to these organizations be withheld pending closer cooperation between the two groups was referred to a committee to be specified by President Rubin.
11. Two year terms for officers — An amendment to the Constitution and By-Laws by S. Ben Friedman to provide two year terms for President, President-elect, Vice President, Treasurer, Speaker and Vice Speaker was referred to the Constitution and By-Laws Committee.
12. Mr. Rubin moved to commend Ronald Lubman and the Convention Committee for an outstanding and successful convention. Seconded and passed by acclamation.
13. Report of the Nominating Committee was given by Chairman Paul Freiman. The Nominating Committee met on May 20 and on June 10, 1976 and I am pleased to submit the following slate of officers for approval for a mail ballot for the 1977-78 term: President-elect: Edward Nussbaum, Rockville and Richard D. Parker, Kensington; Vice President: Ben G. Owens, Annapolis and Stanley J. Yaffe, Odenton; Treasurer: Anthony G. Padussis, Timonium; Trustees (2 vacancies): 1st pair: Adolph Baer, Hagerstown and Robert J. Martin, LaVale; 2nd pair: Vincent P. Burkhart, Baltimore and Normand A. Pelissier, Joppatowne.

    There being no further nominations from the floor, Mr. S. Ben Friedman moved for adoption of the report. Seconded and passed. The slate will be sent to members for a mail ballot vote.
14. Board of Pharmacy Nominees — Mr. Freiman announced the following nominees for the opening on the Board of Pharmacy for a sixth pharmacist beginning in 1976: 1) Leonard J. DeMino, 2) Stanley J. Yaffe and 3) Emanuel Richman. Morris Yaffe nominated S. Ben Friedman for the vacancy. Seconded. Mr. Friedman declined the nomination. Mr. Ernest Gregg moved for the nomination of Robert J. Martin of LaVale but withdrew the nomination for submission for another vacancy.

    Mr. Freiman announced the recommendation as consumer representatives to a new vacancy on the Board of Pharmacy the following : Mrs. Estelle Cohen, faculty member and head of the Department of Consumer Affairs at Notre Dame College in Baltimore and Mrs. Edna DeCoursey Johnson with the Urban League in Baltimore. Both nominees have been serving on the MPhA Pharmacy Consumer Affairs Committee. The consensus was for approval of these recommendations.

    For a vacancy on the Board in 1977 for the position of I. Earl Kerpelman: 1) Paul Freiman, 2) Victor H. Morgenroth and 3) Anthony G. Padussis. Mr. Gregg moved for the nomination of Robert J. Martin of LaVale, seconded. Mr. Truitt nominated Gerald Overbeck of Salisbury, seconded. Messrs. Morgenroth and Padussis withdrew their names from nomination. Stanley Yaffe moved for approval of Messrs. Freiman, Martin and Overbeck. Seconded and passed.

    Mr. Freiman presented the nominations of Irvin Kamenetz as Speaker and Samuel Lichter as Vice Speaker, seconded. Mr. Freedenberg moved for the nomination of Victor H. Morgenroth as Speaker, seconded. On a closed ballot Mr. Morgenroth was elected Speaker for 1976-77 and Mr. Samuel Lichter as Vice Speaker. Mr. Freedenberg moved for the election by unanimous vote of the Speaker of the House.

    Mail ballot for Board of Pharmacy Nominees — A proposal by Mr. Lubman for mail ballot election of nominees for the Board of Pharmacy referred to the Constitution and By-Laws Committee.

Mr. Stanley J. Yaffe recommended that the 1977 Convention be held in Ocean City, Md.

The Final Session of the House of Delegates adjourned at 1:00 P.M.

Following announcements concerning the installation banquet dance in the evening, the tennis tournament and the Continuing Education Program, the General Session of the Maryland Pharmaceutical Association 94th Annual Meeting was adjourned at 1:15 P.M.

Tuesday Evening — June 22. Cocktail Party and Annual Installation Banquet and Dance.

WEDNESDAY — JUNE 23

9:00 A.M. to 12:00 noon — Continuing Education Session — Co-sponsored by APhA Academy of Pharmacy Practice. "Understanding and Using Bioavailability Information: An Action Seminar" Workshops conducted by Richard P. Penna and William F. McGhan.

Charles E. Spigelmire *(Continued from Page 11)*

In reviewing the history of pharmacy in Maryland for the past quarter of a century, I have been struck by the indispensable contributions of this one person. This history indicates that here was, and fortunately still is, one giant of a man — a man who could always be relied on to respond to the needs of his and our profession; a man for whom the advancement of pharmacy through the united efforts of pharmacists working through their pharmaceutical associations was an article of faith; a man who was willing to work for the progress of pharmacy during his free time — days, nights and holidays — as a labor of love. I gratefully acknowledge my personal debt to you for your assistance and dependability in all the many problems confronting pharmacy that we have addressed over the years in association affairs.

Charles, it is a great honor to present this 1976 Honored Alumnus Plaque to you on behalf of the Alumni Association of the University of Maryland School of Pharmacy. We wish you and Josephine many more years of health, happiness, good fellowship and the joys of selfless service to your fellow men and women.

COMMITTEE REPORTS

PRESCRIPTION INSURANCE PROGRAMS (THIRD PARTY Rx)

Marvin Friedman, Chairman

The scope of activity of the Third Party Committee for the year 1975–76 has not been limited to, but has focused primarily on the problems and actions in the area of Medicaid. Continuous, and hopefully fruitful meetings have taken place with the representatives of the Department of Health and Mental Hygiene (DHMH), members of the legislature, and the Association membership itself so that the majority viewpoint could be carefully presented.

Initial proposals from HEW as to the implementation of a Maximum Allowable Cost/Estimated Acquisition Cost (MAC/EAC) program for State Medicaid payments were sent out in September 1975. However, this development was quickly overshadowed in Maryland by the cutbacks in Medicaid services under the misleading title of "Cost Containment". One public hearing was held on December 1, 1975 and the program was implemented unchanged on January 1, 1976, instituting a 50¢ co-pay on each Medicaid prescription and eliminating all OTC medication from the program (except insulin, insulin syringes, and certain family planning supplies). Your Committee fought these proposals from the time they were made public, including a very pointed presentation by Executive Director Gruz at the above mentioned public hearing, but to no avail. These restrictions are still with us and we will continue to explore the means of modifying them or removing them altogether. Our ultimate objective is, of course, the restitution of all services. Until that can be achieved, we will work for an OTC Formulary concept allowing certain classifications of OTC's to be dispensed on Medicaid and a step by step reduction in the co-pay provision until it is eliminated altogether.

In February 1976 DHMH announced, with no prior warning, the institution of a new computer program to be applied to the payment of all Medicaid invoices. This method of payment would necessitate the insertion of maximum price levels for each drug that is covered under the program into the computer, which would then lower any prescriptions submitted with a higher cost, whatever the reason. This in effect would have meant a MAC/EAC program at the State level even if the Federal guidelines were not ready by April 1, 1976 as originally announced. Your Committee has vigorously opposed this concept and we believe has achieved a fair measure of success. In cooperation with PHARMPAC (Pharmacists Political Action Committee), a strong campaign of opposition to any program that would effectively lower the price base without concurrent fee schedule adjustments and inflationary factor considerations has been pursued. Legal counsel was engaged should the possibility of a court action arise. During the ensuing negotiations with DHMH, his advice and cooperation has been invaluable.

The state's present position on this program is one of indefinite postponement or until the Federal program is instituted, now scheduled for August 26, 1976. However, this date remains questionable. If a price program is inserted into the computer, it is supposed to be AWP with a small exception list calling for direct prices and/or quantity prices in few instances. This list started with approximately 50 drugs and we have already been successful in eliminating 50% of these.

Recap of Medicaid developments for the year:

1. Cost Containment — Association fought to eliminate co-pay and exclusion of OTC medication. LOST
2. Committment by DHMH for advance notice to be given to MPhA committee of any proposed changes in Medicaid regulations and consideration of our positions on them. ACHIEVED
3. MPhA must have input on any price structure under MAC/EAC. ACHIEVED
4. Advance MAC Price List to be provided to all vendors before implementation. State says it cannot do this; however, the Committee is still pressing for this requirement.
5. System of parameters to safeguard against errors resulting in under payments and a system to identify any lower prices on remittance sheets. UNDER CONSIDERATION.
6. Accurate and regular (weekly if possible) update on price changes. PROMISED
7. Continuing negotiations on equitable fee adjustment taking into consideration all of the following factors:
   - A. Increased paperwork on invoices
   - B. Payment within 30 days of submission of invoices
   - C. Increasing cost of supplies
   - D. Inflationary factors
   - E. Accurate, valid survey to determine actual cost of filling Rx.

The problems posed by the proliferation of HMO's, primarily within the Baltimore metropolitan area, were brought into focus by the many problems encountered with Medicaid during the past year. Due to the fact that these groups are still primarily serving Medicaid patients, a severe impact on the prescription volume was felt by those community and chain pharmacies who have the bulk of their Rx practice in Medicaid prescriptions. The Committee feels that we must continue to fight for "Freedom-of-Choice" for enrollees in these HMO's as far as their pharmacy services are concerned. Along this line we have recommended to the State that pharmacy services be dropped as part of the capitation that each HMO receives under their yearly contract with the State, thereby allowing patients to have their prescriptions filled as in the past at the pharmacy of their choice with the State paying the vendor directly on a fee-for-service basis.

The most troublesome problem with HMO Rx's has been the nonpayment of invoices for Rxs filled in good faith on "Red-White" Medicaid cards, when the patient has already enrolled in an HMO. Pressure from the Committee and the threat of legal action against both State and HMOs has gotten some results in payment of these bills, but the problem is a continuing one. The best concession from the State so far is that they will guarantee payment for these Rxs, either by applying direct pressure on the HMO to make payment or by removing funds from their monthly capitation payment. However, at this time we only have the State's word on this.

The Committee would recommend that all members who have strong feelings against the HMO concept in providing pharmacy services convey these to all government officials who would be concerned, playing on the theme of HMO's driving out of existence private professionals who pay the taxes that help fund government programs.

The result of all our negotiations with the State are being closely watched by the administrators of all third party plans operating within the State. Your Committee feels there are many areas in which these plans could improve and to that end the attached chart has been prepared listing various strong and weak points of each. The delegates may wish to make recommendations based on these facts.

THIRD PARTY Rx PLANS JUNE 1976

Plan	*Payment After Billing*	*Pricing Policy*	*Rejection Procedure*	*Fee*	*Claim Form*
APS	30 days (approx.)	AWP paid; Loewy Drug Co. printout used	Minimal rejection rate; prompt reprocessing	$2.00	Good; uses NDC Numbers
Blue Cross of Maryland	14–21 days	AAC asked; will pay AWP if from wholesaler and if noted on form	Very minimal; will adjust prices up or down; reprocessing can be a problem	$2.10	Good; no code numbers required
Construction Workers Trust Fund and Affiliated Funds	15 days	AWB pays; will pay any reasonable charge	Minimal; will do price adjustments	$1.85	Good; uses NDC Numbers
1199A Benefit Fund	60–90 days	May accept AWP; arbitrarily lowers prices however	Moderate; reprocessing is generally prompt	$2.00	Most complicated in use; should be changed
Paid Prescription	30–45 days	Will lower with no explanation; rarely accepts AWP	Moderate; does not return Rx form, but sends a Claim Return Statement that may be confusing	$1.85 to $2.10	"Fair"; uses NDC Numbers; should standardize more
PCS	45–60 days	AWP accepted; will lower with no explanation however	Moderate; does not return Rx form but sends a rejection card that may be confusing	$1.85 to $2.10	"Fair"; has own code numbers but switching to NDC could be improved
Prescription Drugs, Inc. (PDI)	45–75 days	Red Book prices used but makes little attempt to keep up with increases; will arbitrarily lower many prices	Minimal; slow on reprocessing	$1.95	Good; uses NDC Numbers
Pharmaceutical Services Foundation (PSF)	30 days	AWP accepted; will correct errors	Minimal	$2.00	Good; uses "universal" form

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PEER REVIEW COMMITTEE

Irvin Kamenetz, Chairman

The format regarding reported consumer complaints has been most effective in practice during the past year. Each complaint made against a pharmacy/pharmacist received a prompt response. The impartial and complete investigation of the pertinent issues resulted in the ultimate satisfaction of everyone concerned.

On a recent radio talk show the Maryland Pharmaceutical Association was superbly represented by Paul Frieman and Ronald Lubman. The phone number of the Maryland Pharmaceutical Association was constantly mentioned and we anticipated an avalanche of complaints; actually the response was extremely favorable. Many inquiries were received regarding pharmacy and other health agencies, as well as questions unrelated to pharmacy. The general feeling reflected the consumer's satisfaction with his individual pharmacy and pharmacists.

The Peer Review Committee is planning additional publicity to apprise the public of the pharmacist's willingness to listen (with a sympathetic ear) to any complaints.

This year the committee has referred Third Party problems to other related committees.

(Continued on Page 23)

Schulz Joins MPhA Staff

Richard M. Schulz, a 1976 Graduate of University of Maryland School of Pharmacy, is now in the employ of Maryland Pharmaceutical Association in the capacity of Assistant to the Director. He was active in SAPhA and SCODAE during his school years at Baltimore, and worked as an Officer at the Maryland Poison Center during his fifth year. Mr. Schulz' efforts at MPhA are to center on the organization's journal, *The Maryland Pharmacist.* At present, he is also a practicing community pharmacist and holds membership in APhA, MPhA, ASHP and MSHP.

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Maryland Pharmaceutical Association
94th ANNUAL CONVENTION
Sheraton Fontainebleau, Ocean City, Maryland
June 20–23

(Top row, left) Marvin A. Friedman, Chairman of the Prescription Insurance Program Committee, addresses the House of Delegates. (Center) Outgoing President Henry G. Seidman receives the President's Plaque from Melvin N. Rubin, 1976–77 President. (Right) Morris L. Cooper, Curator MPhA Cole Pharmacy Museum, presented a bicentennial feature, "The Apothecary and the Practice of Medicine in Colonial Times."

(Middle row, left) Robert E. Snyder speaking as Secretary of the Board of Pharmacy. (Center) Legal Counsel Joseph S. Kaufman discusses recent court proceedings. (Right) Convention Chairman Ronald A. Lubman enjoying a casual moment with Charles E. Spigelmire.

(Bottom row, left) Delegate Carter Hickman (seated far left) of Worcester County feasts on some Eastern Shore crabs with MPhA convention goers. (Right) Irvin Kamenetz, Kenneth Mills, Anthony G. Padussis and Nathan I. Gruz share company at the cocktail party.

(Continued from Page 21)

REPORT OF THE MARYLAND PHARMACY TRIPARTITE COMMITTEE

Paul Freiman
MPhA Representative

Though many pharmacists are not aware of its existence, there has been functioning in Maryland for the last two years a vital committee that will affect the practice of pharmacy in our state. The committee is the Tripartite Committee and has representatives from all the major organizations in pharmacy including the Maryland Pharmaceutical Association, the Maryland Society of Hospital Pharmacists, the Maryland State Board of Pharmacy and the University of Maryland School of Pharmacy. Its intent is to bring about a common meeting ground to discuss the many problems affecting our profession, and hopefully a unified course of action to help solve these problems. Although slow in beginning, this committee has now begun to function as a vital force in helping to solve old problems and to develop new ideas and goals for pharmacy in Maryland.

At the present time, two subcommittees are functioning under the auspices of the Tripartite Committee. One committee under the chairmanship of Paul Cuzmanes, a pharmacist and lawyer, is working on a revision of the Maryland Pharmacy Law, and another subcommittee under Donald Fedder has completed a project on the proper labeling of prescriptions. At a meeting held on June 18, 1976, at the School of Pharmacy, a final draft on *"The Use of Auxiliary Labeling Systems for Providing Patient Information"* was presented and approved. This document will be distributed to all pharmacists in Maryland and through its utilization by all practitioners, hopefully will lead to safer and more effective use of medication by all patients. At the same meeting Mr. Cuzmanes reported that the first draft of the revised pharmacy act should be ready by October at which time it will be distributed for study and comment by all the organizations represented and their members.

In addition to the two subcommittee reports, the following items were discussed at the June 18th meeting.

1. Holding of quarterly meetings of the Tripartite committee with Donald Fedder serving as coordinator and secretary.
2. Patient profile systems — their utilization and whether they should be made mandatory. This was as a result of recent legislation introduced by Delegate Timothy Hickman to mandate patient profiles. Recommendations to the Tripartite Committee from the MPhA and other organizations will be considered at the September meeting.
3. Pharmacist-in-Charge regulation — It was decided that the Board should issue regulations requiring that each pharmacy have a designated "pharmacist-in-charge" prior to issuance of a permit.
4. Professional duties of a pharmacist — This was in response to a position paper by the MPhA, approved by the MPhA House of Delegates on October 29, 1975. This will be considered by the Board of Pharmacy for further action.
5. Posting — As a result of the recent case involving Philip P. Weiner, it was felt that the Board of Pharmacy, before concerning itself with new posters for 1977, should evaluate the decision and how it affects the Maryland posting law.
6. Oral transmittal of copy of a prescription — As the MPhA has suggested that the Board of Pharmacy promulgate regulations on the legality of copies, it was felt that a position paper by MPhA should be made available to the Board of Pharmacy prior to the next meeting of the Tripartite Committee in September.
7. Legislation — It was felt that the Tripartite Committee could serve as a clearing house for all proposed pharmacy legislation, so that we can go to Annapolis with a unified voice.

DRUG EVALUATION

IBUPROFEN — FURTHER EVALUATION

by

Thomas H. Wiser, Pharm.D.*

Ibuprofen (Motrin, UpJohn) is a recently marketed nonsteroidal analgesic, antipyretic and anti-inflammatory (in high doses) agent. An excellent drug evaluation article on ibuprofen and its kinetics, side effects, precautions, administration and review of clinical studies can be found in the March 1975 issue of *The Maryland Pharmacist.* The difficulty with evaluation of ibuprofen prior to March 1975 was that clinical research studies failed to document long term efficacy and safety especially at the higher dosage ranges of 1600-2400mg. These are key issues in the evaluation of ibuprofen because it is recommended for the long term treatment of two chronic diseases, rheumatoid arthritis and osteoarthritis (degenerative joint disease). This report will address these two issues with emphasis on data that has accumulated in the past two years.

EFFICACY

Blechman, Schmid, et al (1) performed a year long, double blind multiclinic trial in 885 patients with rheumatoid arthritis testing the use of ibuprofen and aspirin. Drug compliance was measured by using serum assays of each drug. Efficacy was determined by using specific predetermined end points with regard to patients' subjective improvement, physicians' evaluation of the disease, and grip strength. Endpoints for toxicity included: ESR, CBC, SGOT, creatinine, alkaline phosphatase, platelet counts, uric acid and stool guaiac values at specific intervals. These patients were on no other medicines at the time of the study and the patients had "classical or definite" rheumatoid arthritis (RA) according to American Rheumatism Association criteria. Results showed a favorable and equal response to both agents with fewer adverse reactions and drop outs with ibuprofen. No serious adverse effects were reported. The only fault with the article was lack of a cross-over and/or control group design. The majority of patients on ibuprofen received 800–1,600mg.

Hamatz, Rolstein, et al (2) compared ibuprofen and placebo in 222 RA patients for a 6 month period using a double-blind noncross-over design. Using appropriate predetermined criteria for improvement based on history, physical findings and laboratory data, ibuprofen demonstrated statistically and clinically significant improvement without serious adverse reactions and only minor miscellaneous reactions. The dosage used was 1600mg.

Royer, Moxley, et al (3) compared the efficacy of ibuprofen and indomethacin in a randomized, double-blind, six-month study of 218 patients with RA. Appropriate predetermined criteria for efficacy and toxicity were evaluated. The results demonstrated efficacy in both treatment groups with a lower degree of adverse reactions in the ibuprofen group. No serious adverse reactions were reported. There was no cross-over design in this study. The dosage used was 1600 mg.

The above 3 studies and others (4), (5) have demonstrated efficacy within each individual study. The best design of all the clinical trials is not without fault, ie., no cross-over pattern or n placebo or control groups. The above references have judge ibuprofen as improving clinical symptoms and also judge it a equal to current standard aspirin and indomethacin regimens. I has been demonstrated that ibuprofen is an efficacious dru comparable to aspirin or indomethacin for long term therapy.

TOXICITY

In all of the references listed above (1), (2), (3), (4), (5), there were no serious life threatening events that were reported. Although most of these studies were 6 months to one year in duration, the maximum dose was 1800mg. A review of 293 patients who had been treated with ibuprofen for a 5 year period revealed a 13.6% occurrence of side-effects in 40 patients. Most of the reactions were minor with the majority being "dyspepsia" (27 cases). The most serious case was an episode of melena. No deaths occurred and no evidence of hepatic, bone-marrow or renal dysfunction.

Ibuprofen was administered for 12 months, at doses up to 1200mg to 30 patients with documented Peptic Ulcer Disease (PUD) as demonstrated by endoscopy (6). In the 24 patients who completed the whole study, no positive changes or new findings were noted. Two patients dropped out for personal reasons and 4 patients dropped out because of GI intolerance, but no evidence of ulceration was found by X-ray or endoscopy.

Visual disturbances were reported when the drug first came on the market (7). In a double blind prospective study, 78 patients with Degenerative Joint Disease (DJD) were studied while on 1600mg. of ibuprofen for 24 weeks (8). Results from the ophthalmologic examinations and historical findings did not show eye toxicities.

A toxline as performed with assistance of Dr. Gary Oderda of the Maryland Poison Information Center printed 24 articles with their abstracts and revealed no significant adverse effects.

All of the references cited above plus the toxline do not reveal significant adverse or toxic data which would preclude the use of ibuprofen.

RECOMMENDATION

Ibuprofen appears to be an efficacious analgesic, antipyretic and anti-inflammatory agent (in high dose) for Rheumatoid Arthritis and Degenerative Joint Disease. Adverse reactions appear to be statistically and clinically less significant than aspirin, indomethacin or phenylbutazone. This drug is not a replacement for aspirin but is an acceptable alternative for patients who can't tolerate aspirin.

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*Dr. Wiser is Assistant Professor, Division of Clinical Pharmacy, School of Pharmacy/University of Maryland Hospital and Assistant Director for Primary Care, School of Medicine, University of Maryland.

(Continued on Page 32)

Epidemiological Implications of Pharmacy Practice

by

Arlene Fonaroff Ph.D.*

Each of us on the social sciences panel have been asked to identify and illustrate how his/her discipline applies to pharmacy practice; to illustrate teaching methods and content; and to discuss student receptivity to subject matter and perspective. It's fitting that the discussion on epidemiology appears as today's final paper because epidemiological thinking employs an ecological approach in which there is a synthesis of variables from social and behavioral sciences. Health and disease in the community, after all, reflect what people think, feel and do as they carry out activities of daily life through multiple roles in multiple environments. Epidemiologists observe, measure and analyze such environmental behavioral outcomes in relation to health and disease in population or subpopulation groups in the community.

Applicability of Epidemiology to Pharmacy. One's probable susceptibility to health and disease, disability, life expectancy and death may be evaluated in relation to the epidemiology of health and disease in the community or nation. The distribution of health attributes in the population provide the foundation for understanding community or national health status. While one tends to view morbidity and mortality statistics and the incidence or prevalence of disease[1] with a dispassionate eye, each statistic reflects both the reality of a personal encounter and the probability of a future encounter with disease, disability or death. Such experiences also reflect the successes and failures of multiple social and political and economic systems to provide citizens with opportunities which enhance the quality and duration of life. Access and availability to pharmaceutical products is part of this experience.

All communities contain multiple exposure and susceptibility to occurrence and sequelae of disease. Of significance in epidemiological phenomena is the population's concepts of health and disease, since decisions stemming from these concepts effect social values and goals, subsequent community health action, and personal decisions for disease prevention and health maintenance. Every human group throughout the world has its unique concepts of health and disease, and as we all know there are many differences, not only in disease concepts held by laypeople and health professionals but within each of these groups. Embodied in these concepts are definitions of a healthy norm and a systematic way of identifying and dealing with deviations. Note here that disease is considered as a deviation from the norm while health is regarded as the capacity to function in or adapt to environments. Whether in rural or urban America, inner city neighborhoods or suburbia (or remote African or Amazonian villages), the framework for action or therapy occurs when deviations from this healthy norm are defined.

This epidemiological perspective can provide both an intellectual orientation and pragmatic materials for pharmacy. Let us consider its orientation first and application second.

Orientation. Epidemiology is an ecological science which describes, measures and interprets the manner in which human-environment interactions influence the occurrence and course of health and disease in a population or subgroup within the population. The focal point for obtaining data is the community — also the practice setting for pharmacy. Epidemiology, as human ecology, assumes that the individual, society and culture, as well as the biotic and physicial environments exist not as discrete components in isolation from each other, but as a complex interacting network, or ecosystem, where each component intimately affects the other. Through this interaction, human groups are constantly striving to adapt to everchanging environmental conditions. Successful human adaptation indicates that the individual or group has reached a state of health.

Epidemiology seeks to explain causal factors and the manner in which their association influences the natural history of a disease. In order for a disease process to become established, the necessary ecological conditions must be present in the host (people), the agent (physical, biological, chemical, social or behavioral mechanisms) and the environment (physical, biological, social), as well as the ability for each to sufficiently interact with one another. For tuberculosis to occur, for example, there must be a susceptible host (man), contact with a viable tubercule bacillus and an adequate medium for exchange in which the agent may be transmitted. It has taken many centuries for us to reach this level of understanding about disease causality(1).

Over time, emphasis has shifted to different points in epidemiological relationships and in definitions of how disease causality occurs. Because the surge of epidemiological science coincided with the need in the 19th century to investigate the source, spread and control of major epidemics of infectious diseases such as cholera, plague and smallpox, the traditional emphasis was on infectious organisms as prime etiological agents of disease. The epidemiological task was to identify the specific agent that caused a specific disease in a specific population; and the physical environment was considered the source

(Continued on Page 28)

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*Dr. Fonaroff is Staff Officer/Research Associate in the Assembly of Behavioral and Social Sciences, National Research Council of the National Academy of Science. She also is an Associate Professorial Lecturer in epidemiology and environmental health at George Washington University. When this paper was prepared, Dr. Fonaroff was Assistant Professor of Pharmacy Administration, University of Maryland School of Pharmacy.

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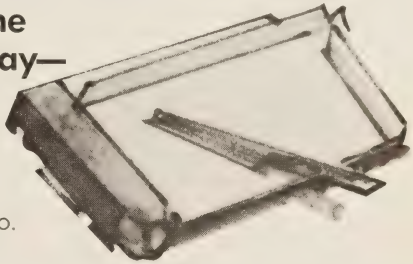

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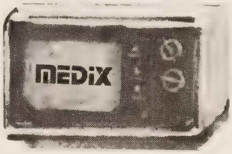

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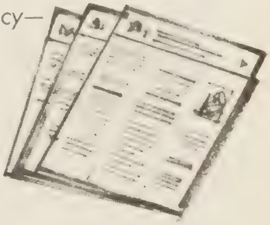
- *Wellcome Trends in Pharmacy*—a news periodical for practicing and student pharmacists



- The Burroughs Memorial Fellowship and The Wellcome Memorial Fellowship, granted for field work in pharmacy

- Summer employment for undergraduate pharmacy students at our production facilities in Greenville, North Carolina of specific disease agents (2). Eventually, the investigation for the sole source of infection developed into a more comprehensive approach for understanding the methods and causes of disease transmission. We now understand that causality involves not one but multiple causes stemming from complex interactions between host, agent and environment. In addition, we are now aware that certain diseases may manifest themselves in the host without the host experiencing the disease(3). Not all persons experiencing causal factors actually experience a disease, like the chronic cigarette smoker who does not develop lung cancer or the person exposed to streptococcal infection who does not become infected.

Contemporary epidemiology recognizes the overwhelming importance of social and behavioral mechanisms in the host as "agents" of disease. We also have altered our concept of what constitutes "environment" to include not only tangible properties of the physical and biological world which facilitate host-agent interaction, but properties of the social world as well. Today, epidemiology emphasizes the overwhelming importance of social and behavioral mechanisms in the host which operate as "agents" of disease(4). Such factors as, for example, dietary habits, exercise and stress are "agents" in hypertensive heart disease. Similarly, "environment" now also includes not only tangible properties of the physical and biological world which facilitate host and agent interaction, but properties of the socio-cultural world as well. Population density, overcrowded housing, pollution, poverty and family disorganization may function as "agents" in many diseases.

With this expanded concept of disease causality, even what constitutes a "disease" has changed. The public health and community medicine concerns of today include: evidence of lack of social well-being, failures of personal adjustment such as alcoholism, drug addiction and mental illness, as well as failures of community organization to provide adequate employment to vital human resource services such as health, education, welfare, law, *etc*.(5). Today, the health of the community is seen to be causally linked with the population's biological, social and cultural characteristics as they interact with environmental and materials resources(6).

How better than to orient pharmacists to the dynamics of health and disease than through epidemiology? The major goal of epidemiologic investigation is to prevent and control disease in human groups by identifying that part of the web of causation which is amenable to intervention. Drugs of course often play a dominant role in intervention either for altering host susceptibility or agent virility. Drugs may be used solely to affect agent potency as in the case of an antibiotic. Drugs like insulin, on the other hand, alter homeostatic mechanisms in the host by enabling the body to appropriately metabolize sugars.

Disease processes, however, may be altered through environmental change, *without* touching either the person or disease agent, and without pharmaceutical technology. For example, separating pedestrians (host) and cars (agent) into separate traffic arteries (environment) decreases the probability of accidental injury involving motor vehicles. Often, shifts in the health status of the population may result from decisions that do not consciously aim to eliminate pathogenic agents of disease. Elimination of poverty *per se*, for example, can drastically improve community health status through better housing, sanitation, and nutrition.

Implications of Pharmacy Practice. What does epidemiology offer community and hospital practitioners who daily dispense a multitude of drug products and information?

Among the actual and potential uses of epidemiology are: *(i)* the definition of health problems for community action through morbidity and mortality statements, their relative importance and priority, and the identification of high-risk groups; *(ii)* the analysis of operational health services to establish standards for measuring efficacy of services, methods for improvement, and directions for developmental community health programs(7). Epidemiological methods are used in drug-use review to evaluate the efficacy of physician prescribing habits and to monitor adverse drug reactions, in clinical trails to evaluate drug efficacy and interactions, and in community surveys to identify perceived needs and uses of drugs.

In the past decade we have witnessed considerable movement away from drug- or product-oriented practice to a current emphasis on client-centered therapy where the person (who may be a patient) with a problem (which might be a disease) is in need of symptom relief or health maintenance, for which a drug is to be administered. Let us remember that drugs, (dispensing and consumption) after all, are indicators of disease process within a practice environment and within the community served by the pharmacy. A careful inventory of drugs for which diagnosis may be objectively or subjectively correlated is indicative of the distribution of health problems which reflect communication and transaction between providers and consumers of health care(8).

I contend that epidemiology provides an orientation for understanding the dynamics of health and disease in a community which is overlooked by pharmacists in their customary one-to-one relationship with a client. Epidemiology defines at the macro-level the nature of health problems to which the population-at-risk may be susceptible or may have already encountered. The community, or its population, after all, is a composite of people who come to need and use pharmaceutical services. A pharmacy in Harlem would house a different product stock than one on the Navajo reservation. A pharmacy in Sun City AZ would be unlike one on a college campus. At the grass roots level, pharmacists are perhaps among the most able of health practitioners to diagnose a community's disease experiences — at least those for which prescribed or nonprescribed products are sought. They are in a central position to refer individuals to community health resources, to refer the particular or general community health trends to local public health and other human resource agencies, and to communicate drug-related problems to private physicians.

The epidemiological approach, therefore, parallels the current pharmaceutical approach for a patient- or client-centered practice rather than a drug- or product-oriented practice. The epidemological or ecological approach reminds us to consider that multiple social and other environmental forces effect the individual's encounters with the drug-use process. As Kerr White(4) recently wrote "At the very least, epidemiology should help to sensitize medicine to society's health needs and prepare us for demand which will inevitably find expression through the political process . . . a simple definition of our discipline will suffice: 'epidemiology is the study of that which is upon the people.' "

Teaching the Epidemiological Approach in Social Science. The objectives generated for the University of Maryland School of Pharmacy course in social sciences are based on the philosophical position just described. On completing the course, students are expected to demonstrate knowledge and understanding in the following areas: (Continued on Page 30)

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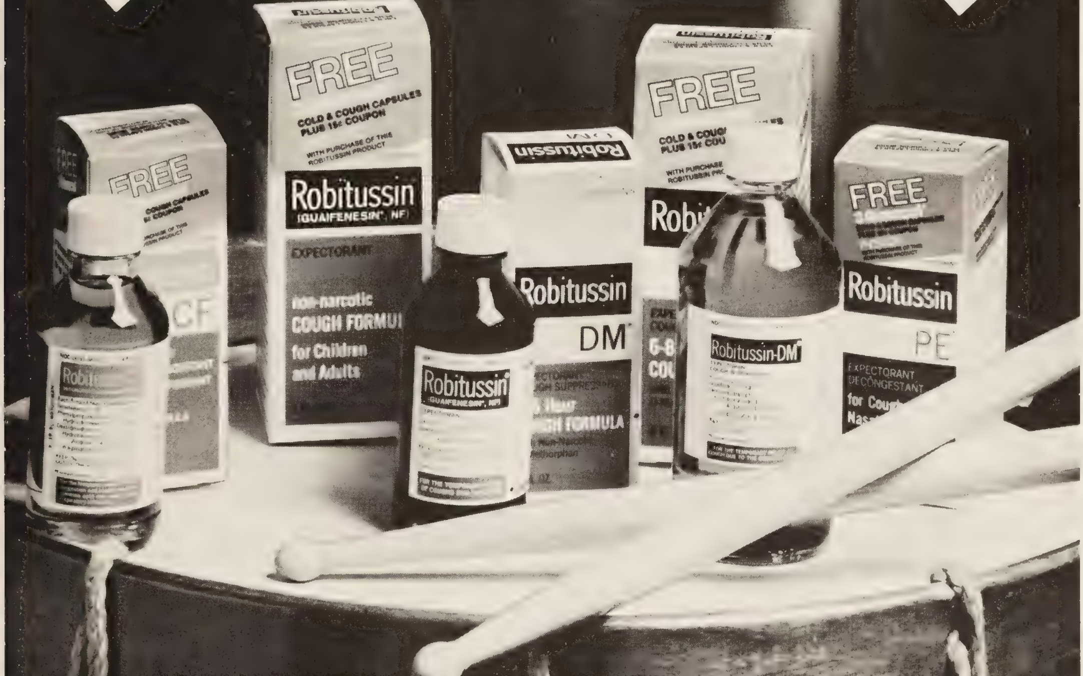
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Your partner in the good business of better health. A·H·ROBINS A. H. Robins Company, Richmond, Va. 23220 *(i)* epidemiological factors influencing the drug-use process, particularly the socio-cultural components influencing beliefs and behavior (specifically by defining and providing examples of how social, cultural and behavioral factors influence the nature and distribution of community health status);

(ii) ecological factors influencing planning, organization, delivery and utilization of health-care services (specifically by defining how ecological factors interact to influence health-care services);

(iii) the drug-use process as a system for maintaining health and preventing illness (specifically by defining components of the drug-use process and giving examples of how the process may be influenced by socio-cultural determinants);

(iv) the client-centered health care approach (specifically by defining the approach and illustrating its application to pharmacy practice); and

(v) potential opportunities for pharmaceutical services in comprehensive health care (specifically by giving examples of alternative ways in which pharmaceutical services may increase personal and community health care).

To acquire knowledge and understanding, the course utilizes basic concepts for which substantive data is presented through didactic lectures, films and class discussion. These concepts include: *(i)* the health-disease continuum, *(ii)* health as adaptation and drugs as adaptive mechanisms for health maintenance, *(iii)* sociopharmacology (the manner and use of drugs in society), *(iv)* the drug-use process (the system from perceived need for a drug through to its utilization and feedback of continued or future need), *(v)* human ecosystems (ecological interactions between co-existent physical-social-cultural-psychological environments) that influence learned health behavior, *(vi)* the life cycle or stages from conception through death, focusing on health behavior as it influences susceptibility to illness experience and health maintenance, *(vii)* community diagnosis, a method which links risk factors and behavioral factors for a specific disease in a specific population (for example, risk and behavioral factors in hypertension differ from those in diabetes), diagnostic indicators of personal and community health (health status, morbidity, mortality, incidence, prevalence) and drugs as diagnostic indicators of health problems, *(viii)* socio-cultural variability in health/disease experience, *(ix)* managing community health care (social values and social organization in health care delivery).

A required community project assignment provides students with opportunity to observe and examine multiple environmental factors influencing personal and community health, and to observe how these factors influence the drug-use process and the delivery of pharmaceutical services. Students within a 10-12 person group either self-select or are randomly assigned to a community facility or neighborhood. A paper is produced by each group which defines personal and public cultural influences on a disease process characteristic in the community. The case study method is used to demonstrate the course of the same illness experience in persons of lower and upper class backgrounds.

Student Receptivity. In my experience, pharmacy students find basic social science content and approach incompatible with the thought process required for mastering such subjects as pharmacology, pharmacy, anatomy, physiology and pathophysiology. While they are enthusiastic about client-centered therapy, they have a false expectation of knowledge required for its practice and grow impatient with what they label "common sense" findings by sociologists and other observers of human interaction. They also have difficulty separating people from patients, health from disease, and incorporating a learning style divergent from the thrust of the basic science curriculum. Many pharmacy students, like kindred students in medicine, nursing and other health professions, utilize traditional mechanistic or reductionist models in learning technological, medically-oriented problem-solving skills. Yet clinical orientation (in the contemporary sense) requires a more dynamic adaptive model of a sensing, understanding and regulating system governing the individual's ability to cope with external and internal stimuli(4).

A comprehensive health system (including education of its providers) offers services for health promotion and maintenance (the prevention of illness), care of the sick (treatment of disease), and rehabilitation. Drugs and pharmaceutical services play vital roles at each stage, since varying forms of chemotherapy are the recommended procedures for altering morbidity and mortality states primarily through altering host-agent interaction. As we here all know, environmental and other social control factors frequently prevent illness and promote the health of the population, reducing the monetary and social costs of treating illness and rehabilitation of the disabled in ways that drugs never can or should. While in addition to death avoided, drugs may reduce the treatment period and attendant costs of disease. Such reductions cannot be demonstrated in all diseases and at all points in the health-disease continuum and there are attendant social and economic costs on the use of the drugs.

Epidemiology's contribution to pharmacy education might well be in providing the perspective for pharmacy students to allow the shift from individual transactions between client-practitioner to a broader collective concern for care of the entire population. It is epidemiology, when ecologically employed, that relates the individual to the population and that has the potential to help balance personal and public needs, burdens, risks and benefits(4).

Acknowledgement. Sincere thanks are extended to Dr. Benjamin Hodes for comments made during preparation of this manuscript and for the synopsis he delivered at the Seminar.

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New AACP President Calls for Identity, Self-Study and Reform

Newly installed American Association of Colleges of Pharmacy (AACP) President William J. Kinnard has called for the pharmacy profession and its educational institutions to seriously study contemporary practice roles and plan effectively for the future. Citing the recent comments of Chief Justice Burger, Dr. Kinnard noted the need to be jolted out of professional lethargy and toward the nation's future health care needs. He was critical of the patchwork approach to the roles and functions of the pharmacist and argued for a more comprehensive approach to professional development.

While many of the new clinical pharmacy services are subject to some controversy, the new President observed that "appropriate product selection, and adequate patient instruction must become routine capabilities of our practitioners." He cited the need to work with other professions, the American Pharmaceutical Association, and other Pharmacy groups in developing roles and the appropriate practice competency standards. Dean Kinnard noted the manner in which this could be facilitated included support of the American Council on Pharmaceutical Education in accrediting continuing education and by directing the research resources of the colleges to practitioner problems, such as the development and evaluation of modern reimbursement systems for pharmacy services.

The University of Maryland pharmacy Dean was highly critical of the enrollment increases, undertaken at some colleges and the proliferation of specialized educational programs when some basic academic requirements are still not satisfied. He was critical of the student/faculty ratios at some colleges and promised that the Association would direct a substantial effort to the study of this problem. He also called for the elimination of graduate programs at institutions which apparently lack the staff and physical facilities required to offer quality graduate instruction. Dr. Kinnard believes that these limited resources could best be spent by directing them toward the improvement of the professional curriculum. He placed high priority on studying this issue during his term as President.

The chief AACP officer called for an end to the old apprenticeship of post graduation practical experience. The President stated that pharmacy was about the last holdout in this antiquated approach to certification. He urged working with the National Association of Boards of Pharmacy and the various state boards to resolve the problem.

In commenting upon the Report of the Study Commission on Pharmacy, Dr. Kinnard noted that the document was a guide and not a mandate. He expressed concern over the definition of and need for the "clinical scientists" called for by the Commission.

In the spirit of the Bicentennial, Dean Kinnard called upon the delegates to "look past Remington and Proctor to 1776, (when) we entered a very important time in the development of our profession. Men such as John Morgan were working to split pharmacy away from its combined relationship with medicine to achieve a singular identity for pharmacy. Let's build on the work of Morgan and others that followed, bringing our own pride and strength to advance the profession of pharmacy."

LAMPA

In recognition of her many years of service to the organization, Ann Crane was selected LAMPA's Honorary President. She has been Communications Secretary for fourteen years, during her tenure working with seven LAMPA presidents: Helen Kaminski, Ruth Levin, Sadye Friedman, Lillian Slama, Mary Schrader, Dora Rockman and Arlene Padussis. Using her secretarial experience with a major industrial corporation, she prepared excellent reports and communications, and authored the LAMPA NEWS column. Instinctively, she seemed to sense problems before they arose, and capably solved them, whether it meant taking minutes, making a prize, or doing whatever needed doing. She used her originality and creative ability to plan approximately 23 of LAMPA's last 42 programs. In 1973, she compiled and edited LAMPA's Cook Book. Revising LAMPA's By-Laws (a year-long process) was another of her accomplishments. "Ann's Tours" as she calls the nine trips she worked-up, are known for their well-planned, party-like quality. The trips ranged from a VIP tour of the White House in Washington, to the Mount Clare Mansion in Carroll Park, in Baltimore.

She was asked to take the presidency of LAMPA several times, but declined, saying she felt she could serve LAMPA better as secretary.

She is a collector of fine china, is a prize-winning needlecrafter, and enjoys cooking. Her outgoing, energetic personality has won her many friends in the pharmacy community.

In 1969, LAMPA surprised her with a luncheon in her honor. She is LAMPA's seventh Honorary President.

Ibuprofen *(Continued from Page 24)*

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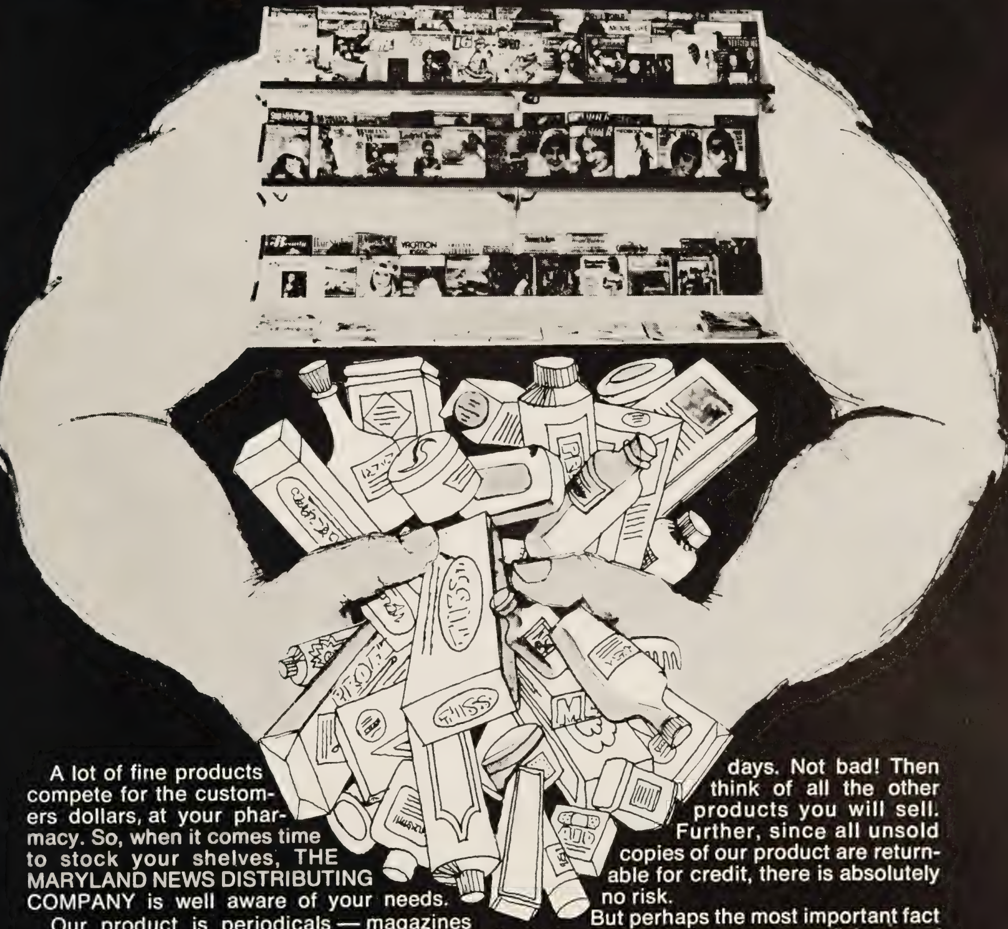

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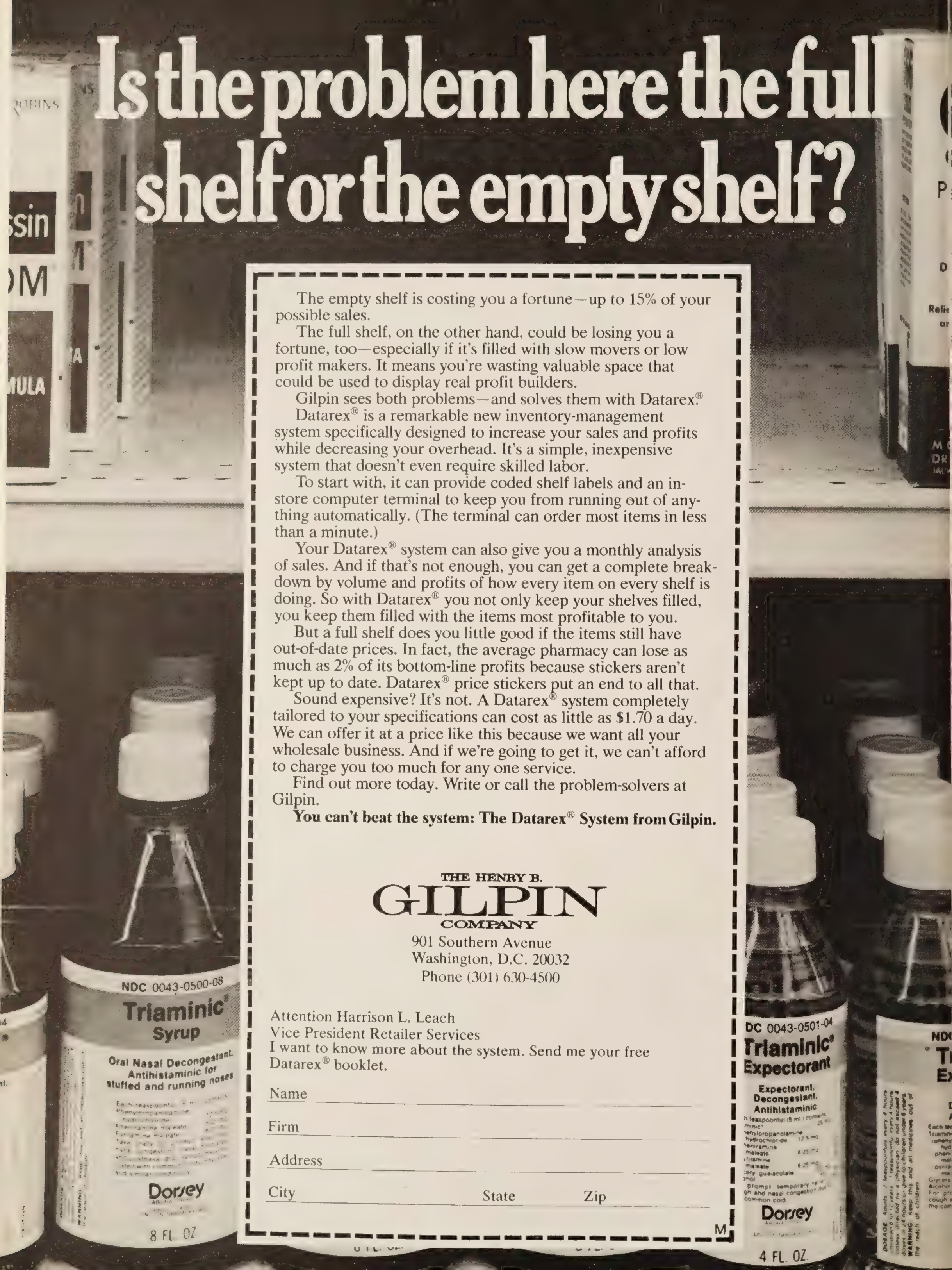

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Membership — Needs and Rewards

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Five Stages of Illness

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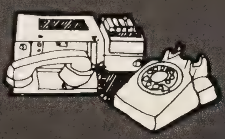

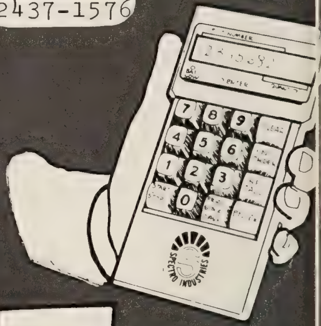

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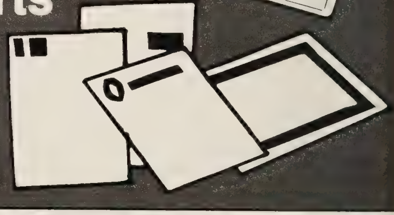

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editorial

MEMBERSHIP — NEEDS AND REWARDS

Pharmacy has long been an area where the opportunities to establish one's professionalism have been subverted by many external and internal forces. The recent Supreme Court ruling which equates your professional contribution to that of a clerk selling law books, is in one sense a slap in the face, but in another sense, a much needed call to arms. Never has there been such a need for unified, determined effort involving all segments of pharmacy. The body of pharmacists who at this time are hindered by factional interests must reassess their position of individualism. It is only through a concerted effort that pharmacy organizations can function as a viable agent against those forces that challenge the essence and value of our work.

An organization is only as good as the ideals which govern its method and the wisdom to mold that method toward reaching realistic goals. It is now within our grasp to accomplish much in the areas of legislation, continuing education, news dissemination, social welfare, e.g. retirement plans, and public relations. Whether or not we seize the opportunity and improve pharmacy from what it is perceived to be today, is no longer a unilateral decision. Although our motivations must be personal, our actions must be from a mandate. We must become one voice respected by all with whom we come in contact.

Maryland Pharmaceutical Association can be that voice. As an organization, our goals are to:

- Represent the needs of the profession of pharmacy
- Act as a unified force in promoting those needs in the halls of Annapolis and Washington
- Serve as the recognized forum through which problems surface and are justly resolved
- Keep the pharmacists of Maryland abreast of current events through the MPhA Newsletter
- Work toward establishing an equitable retirement plan for our members
- Function as an educational tool by publishing informative and provocative articles in *The Maryland Pharmacist* and conducting seminars
- Improve our image through an extensive public relations campaign.

Before the Maryland Pharmaceutical Association can achieve these goals, it must be the unequivocal voice of pharmacy in the state. Our membership rolls must reflect the support and cooperation of pharmacists as one body. Any attempt at legislative effectiveness must be founded on the axiom that in numbers there is strength. Too many efforts in the past have been undermined by a membership that did not exceed 50% of the registered pharmacists in the state. *We need you* for us to be a more effective organization to insure that professionalism remains a part of pharmacy. It is time for pharmacy to state its declaration of interdependence; its members, its organizations, its professionalism. Certainly none can survive alone.

This is a plea for membership; a drive that will culminate in pharmacists becoming participants in determining their future, not just spectators. An aggressive stance must be assumed by all. It is now not enough to simply "donate" our monies. We must actively seek the involvement of the many who have not committed themselves to the common good. It is not sufficient to be acquainted with our goals. They must be fully understood and spread widely to our non-member colleagues. The enthusiasm we have with regard to the many positive aspects of pharmacy must now be directed toward safeguarding our own existence.

Yes, this is a plea for new members. More importantly, however, it is a realization that the rewards of full membership are for us to enjoy. The responsibility must likewise be equally shouldered.

—Richard Schulz

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calendar

November 4 (Thursday) — MPhA Simon Solomon Pharmacy Economics Seminar, Quality Inn, Towson

November 17 (Wednesday) — Upper Bay Pharmaceutical Association Meeting

November 18 (Thursday) — First Balassone Memorial Lecture

November 18 (Thursday) — Baltimore Metropolitan Pharmaceutical Association Annual Meeting

November 21 (Sunday) — Pharmacy Bicentennial Dinner-Dance, Martin's West, Baltimore Beltway at Security Blvd.

1977

January 14–21 — MPhA Seminar and Tour — Acapulco and Mexico City

March 5–13 — MPhA Trip to Vail, Colorado

April 14 (Thursday) — MPhA Spring Regional and House of Delegates Meeting

May 15–19 — APhA Convention, New York City

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Fact Sheet on Influenza and Swine Flu Virus

Department of Health, Education, and Welfare
Public Health Service
Center for Disease Control
Atlanta, Georgia

Q. What is influenza?

A. Influenza is a respiratory disease caused by a virus. There are two main types of influenza virus — A and B. Each type includes various strains. Type A epidemics are generally more frequent and severe. From time to time, new virus strains develop. When this happens and if the strains are quite different from previous ones, they may cause epidemics because people have not had any previous exposure to them and consequently have not built up any specific immunity against them.

Q. How is influenza spread?

A. When a person has influenza, or is just coming down with it, the fluids in his nose and mouth contain viruses. They are expelled into the air when he sneezes, coughs or talks. Then they get into the noses and mouths of other people and cause disease in the susceptibles.

Q. How serious a disease is influenza?

A. For most people, influenza is a moderately severe illness but not a serious health threat. Complete recovery can be expected within a week. For certain high risk groups it is a serious problem, and the disease or its complications may be life threatening.

Q. What are the symptoms of influenza?

A. Symptoms of influenza often come on suddenly and may include some or all of the following: fever, chills, headache, dry cough, and soreness and aching in the back and the limbs. Fever seldom lasts more than several days, although the patient may continue to feel weakened for several days to a week or more.

Q. What is the significance of the swine flu virus?

A. The virus which causes influenza in man is constantly changing. Most of these changes are minor. Once every 10 years or so the change is more dramatic, and this is when we have extensive outbreaks such as the pandemic of Asian flu of 1957 and the Hong Kong flu of 1968. The newly identified swine-like virus represents a major change from viruses which are currently circulating in the human population. Since it has the capacity to spread from person-to-person, it could develop into a pandemic strain and cause extensive illness and death.

Q. When was it first identified?

A. In February 1976, a new strain of human influenza virus, designated A/New Jersey/76 (Hsw1N1), was isolated during an outbreak of respiratory disease among recruits in training at Ft. Dix, N.J. Although an influenza virus of swine has been known as the cause of the illness in swine for many years, the Ft. Dix outbreak is the first known example in the United States since about 1930 of person-to-person transmission of a human influenza virus related to that of swine. The influenza virus of swine is relatively stable as opposed to the changing virus which causes flu in people. (There is little difference in the virus which caused flu in swine in the early 1930's from that of today.)

Q. What relationship does this swine-like virus have to the 1918 influenza pandemic?

A. Influenza viruses were first isolated from man in the early 1930's. We can only speculate about the characteristics of the viruses prevalent before that time. Testing of blood of individuals who were living in 1918 shows almost all have antibodies to swine-like virus. This suggests that a virus of this sort may have caused the 1918 pandemic. Such antibodies are also found in many persons over the age of 50, suggesting that a swine-like virus was widespread in human populations, perhaps up to 1930. There is, however, no evidence to indicate that the virus recently identified at Ft. Dix has the same characteristics of virulence as the 1918 virus.

Q. How was the 1918 influenza pandemic different from other influenza pandemics?

A. It was unique because of its high mortality, and the fact that so many of the fatalities occurred among apparently healthy young men and women. It is estimated that the 1918–19 pandemic resulted in a world-wide death toll of more than 20 million, with half a million of the fatalities in this country. By comparison the Asian flu of 1957 — the most severe influenza pandemic since — caused an estimated 70,000 deaths, primarily among the elderly or individuals with chronic illness.

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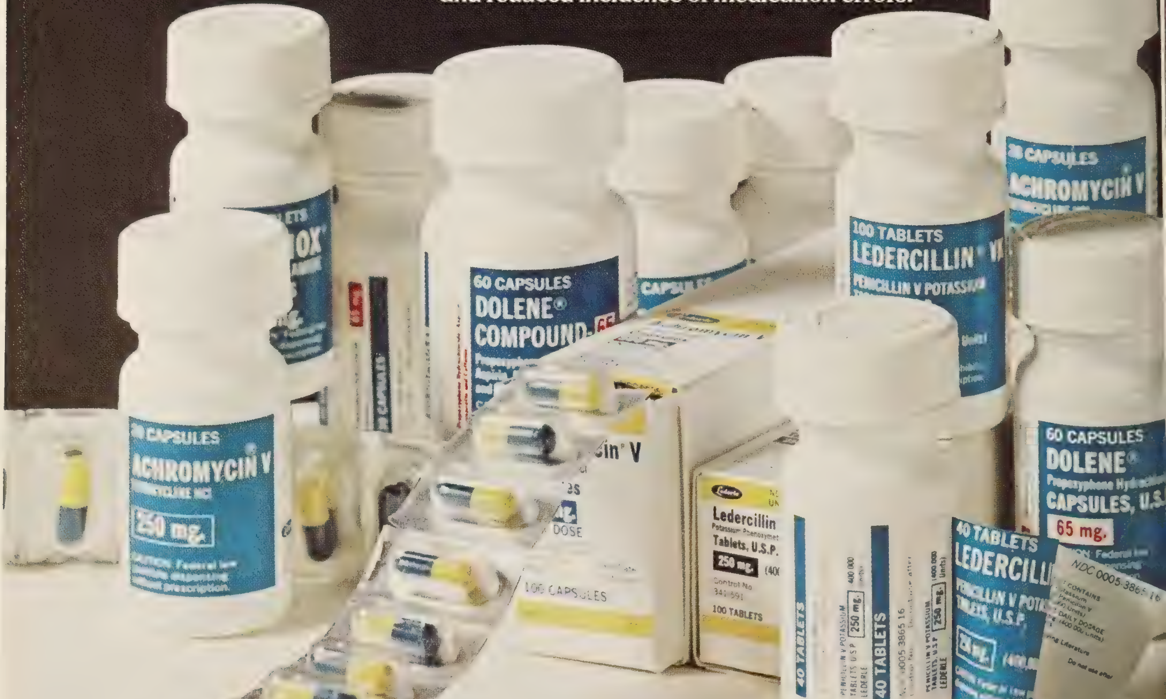
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Q. What has been found in the investigation of the extent of human influenza caused by the swine-like virus?

A. It has been demonstrated that the initial outbreak of swine influenza at Ft. Dix was fairly extensive. Although only 12 cases have been confirmed, extensive blood testing has indicated that several hundred recruits were probably infected during this outbreak. No spread to the nearby civilian New Jersey population has been demonstrated. Hundreds of blood samples of individuals from various sections of the country have been tested. As expected, approximately 80% of people over the age of 50 have swine-like virus antibodies in their blood. Some individuals below the age of 50 also have antibodies to swine virus. However, no additional instances of person-to-person transmission within a community have been demonstrated. In one family, blood tests suggested that person-to-person spread had occurred within that family, but not in the community. On the basis of limited investigation thus far, it would appear that the influenza caused by the swine-like virus is no more virulent than that caused by recently circulating strains of influenza.

Q. Is there a treatment for swine influenza?

A. As with other strains of influenza, there is no specific treatment. Science has, however, given us the ability to significantly blunt the impact of this disease. Vaccines — not available in 1918 — are now an effective way to prevent the disease. Antibiotics, also unavailable in 1918, are important in treating the complications of influenza and thus reducing fatalities.

Q. How effective would a vaccine be against influenza caused by the swine-like virus?

A. Flu vaccines in the past have been variably effective, depending primarily on how closely they match the strain of influenza. Significant progress has been made in recent years. Today's vaccines are more potent, purer, and produce a higher degree of protection with fewer reactions. It is generally believed that effectiveness ranges somewhere between 70–90%. When a distinctive new strain comes along, scientists are generally able to better match a vaccine to the new strain, and it is likely that a high degree of effectiveness could be achieved in a vaccine against the swine-like virus.

Q. How would you go about immunizing more than 200 million Americans?

A. The goal would be to immunize the population in a three-month period — September through November 1976. The nation has never attempted an immunization program of such scope and intensity. It would require a major effort by both the public and private sectors. Essentially, the plan would rely on the Federal government for its purchasing power, technical leadership, and coordination through the Center for Disease Control; on State health agencies for their experience in conducting systematic immunization programs; and on the private health care sector for its extensive medical and other health-related resources. The strategy would be to tailor the approach to the opportunity and need — using mass immunization techniques where appropriate, but also using delivery points already in place, such as physicians' offices, health department clinics, and community health centers.

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The Cost of Filling a Prescription

by Dean E. Leavitt, Ph.D.*

In May 1976 the Maryland Department of Health and Mental Hygiene advertised through a "Notice to Potential Bidders" its desire to engage a contractor to conduct a survey of pharmacy operational data for the purpose of determining the actual costs involved in the dispensing of prescriptions.

The survey was to include each of the approximately 800 community and outpatient hospital pharmacies located within the State. A field audit of at least 40 pharmacies was to be performed to verify submitted information. The contractor was to supply the dispensing costs for each pharmacy, the average dispensing cost for each type of pharmacy operation, and the average state-wide dispensing cost. The task was to be completed in 90 days after award of the contract.

The Maryland Pharmaceutical Association has expressed justifiable concern regarding this survey and its results, so the Association undertook its own cost survey. Using the method recommended by the American College of Apothecaries, a questionnaire was sent to all community pharmacies in the State. Fifty-four usable forms were returned and analyzed.

The ACA method basically involves assigning costs to the prescription department by:

(1) Estimating percentage of time spent in the department by involved personnel

(2) Janitorial expense, rent, heat, light and power allocated on a square footage basis

$$\frac{\text{Prescription Department ft}^2}{\text{Whole Store ft}^2}$$

(3) Other expenses allocated on a percentage of sales basis

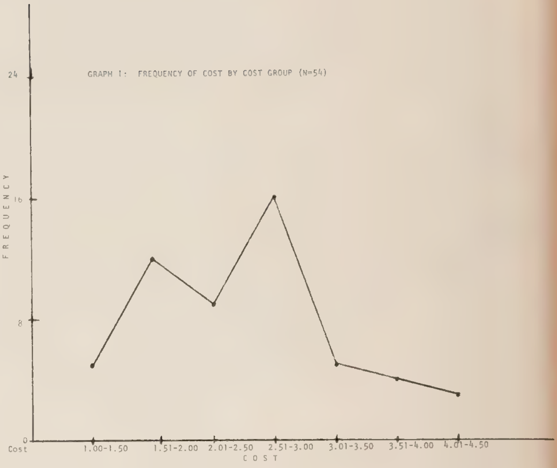
$$\frac{\text{Prescription Department Sales}}{\text{Whole Store Sales}}$$

Results

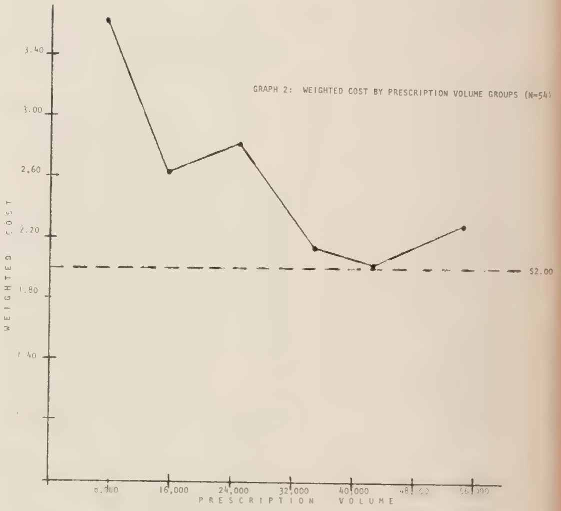
Prescription Volume Group	(n)	Average Prescription Volume	Average Cost
Less than 10,000	2	7,500	$3.621
10,000–20,000	15	15,600	2.639
20,001–30,000	17	24,941	2.804
30,001–40,000	10	34,900	2.141
40,001–50,000	5	42,600	2.021
50,001–60,000	3	54,333	2.287

An analysis of the data resulted in the following:

Average Cost:	$2.535
Median Cost:	2.58
Weighted Average Cost	2.364
Range of Costs:	1.16–4.39



Graph 1, a frequency curve of cost by cost group, indicates that the cost for 68.5% of the participants exceeded $2.00, while only 31.5% reported costs of less than $2.00.



Graph 2, the weighted cost by prescription volume group, indicates that the cost of a prescription never drops below $2.00, regardless of prescription volume.

(Continued on Page 31)

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*Assistant Dean for Student Affairs, Professor of Pharmacy Administration, University of Maryland School of Pharmacy.

No default insurance

Tofranil-PM® Geigy
imipramine **pamoate**

In depression

Daily Dosage Chart

1 h.s.

A major reason for drug defaulting is multiple daily dosage schedules.

Ayd* reports that 70 percent of patients default on a q.i.d. regimen; 60 percent on t.i.d.; 30 percent on b.i.d., and only 7 percent on a single daily dose.

A single daily capsule that provides a full day's medication would logically assure better therapeutic results.

Because one capsule lasts from bedtime to bedtime, Tofranil-**PM**® may markedly reduce the probability of missed doses.

After therapy is initiated with the 75-mg. capsule, the 150-mg. capsule is the dose level at which optimum response is usually obtained.

Please review the prescribing information summarized on the back of this page.

*Ayd, F.J., Jr. (Ed.): Int. Drug Ther. Newslett. 7(9/10):35-50 (Nov./Dec.) 1972.

Tofranil-**PM**®
imipramine **pamoate**

One capsule
lasts from bedtime
to bedtime.

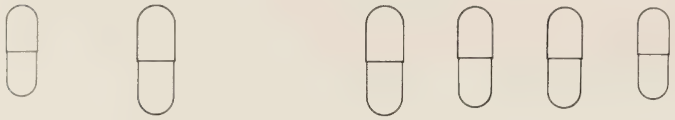
Initial Dose

For Maintenance Therapy

Starting Dose

Usual Optimum Response Dose

A Full Range to Choose From*



75 mg.

150 mg.

150 mg.

125 mg.

100 mg.

75 mg.

***Each capsule contains imipramine pamoate equivalent to 150, 125, 100 or 75 mg. imipramine hydrochloride.**

Tofranil-PM®
brand of imipramine pamoate

Indications: For the relief of symptoms of depression. Endogenous depression is more likely to be alleviated than other depressive states

Contraindications: The concomitant use of monoamine oxidase inhibiting compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur in patients receiving such combinations. The potentiation of adverse effects can be serious, or even fatal. When it is desired to substitute Tofranil-PM, brand of imipramine pamoate, in patients receiving a monoamine oxidase inhibitor, as long an interval should elapse as the clinical situation will allow, with a minimum of 14 days. Initial dosage should be low and increases should be gradual and cautiously prescribed. The drug is contraindicated during the acute recovery period after a myocardial infarction. Patients with a known hypersensitivity to this compound should not be given the drug. The possibility of cross-sensitivity to other dibenzazepine compounds should be kept in mind.

Warnings: *Usage in Pregnancy:* Safe use of imipramine during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed.

Extreme caution should be used when this drug is given to

—patients with cardiovascular disease because of the possibility of conduction defects, arrhythmias, myocardial infarction, strokes and tachycardia;

—patients with increased intraocular pressure, history of urinary retention, or history of narrow-angle glaucoma because of the drug's anticholinergic properties;

—hyperthyroid patients or those on thyroid medication because of the possibility of cardiovascular toxicity;

—patients with a history of seizure disorder because this drug has been shown to lower the seizure threshold;

—patients receiving guanethidine or similar agents since imipramine may block the pharmacologic effects of these drugs

Since imipramine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as operating an automobile or machinery, the patient should be cautioned accordingly

Usage in Children: Tofranil-PM, brand of imipramine pamoate, should not be used in children of any age because of the increased potential for acute overdosage due to the high unit potency (75 mg., 100 mg., 125 mg and 150 mg.). Each capsule contains imipramine pamoate equivalent to 75 mg., 100 mg., 125 mg. or 150 mg imipramine hydrochloride

Precautions: It should be kept in mind that the possibility of suicide in seriously depressed patients is inherent in the illness and may persist until significant remission occurs. Such patients should be carefully supervised during the early phase of treatment with Tofranil-PM, brand of imipramine pamoate, and may require hospitalization. Prescriptions should be written for the smallest amount feasible.

Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, Tofranil-PM, brand of imipramine pamoate, may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.

Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.

An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.

In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g., paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.

Avoid the use of preparations, such as decongestants and local anesthetics, which contain any sympathomimetic amine (e.g., adrenalin, noradrenalin), since it has been reported that tricyclic antidepressants can potentiate the effects of catecholamines.

Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.

Both elevation and lowering of blood sugar levels have been reported.

Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential, since there is limited clinical experience.

Adverse Reactions: Note: Although the listing which follows includes a few adverse reactions which have not been reported with this specific drug, the pharmacological similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when imipramine is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.

Neurological: Numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue); drug fever; cross-sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdominal cramps, black tongue.

Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation or depression of blood sugar levels.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.

Dosage and Administration: In adult outpatients, therapy should be initiated on a once-a-day basis with 75 mg./day. This may be increased to 150 mg./day which is the dose level which usually obtains optimum response. If necessary, dosage may be increased to 200 mg./day. Dosage should be modified as necessary by clinical response and any evidence of intolerance. Daily dosage may be given at bedtime, or in some patients in divided daily doses.

Hospitalized patients should be started on a once-a-day basis with 100-150 mg./day and may be increased to 200 mg./day. Dosage should be increased to 250-300 mg./day if there is no response after two weeks.

Following remission, maintenance medication may be required for a longer period of time at the lowest dose that will maintain remission. The usual adult maintenance dosage is 75-150 mg./day on a once-a-day basis, preferably at bedtime.

In adolescent and geriatric patients, capsules of Tofranil-PM, brand of imipramine pamoate, may be used when total daily dosage is established at 75 mg. or higher. It is generally unnecessary to exceed 100 mg./day in these patients. This dosage may be given once a day at bedtime or, if needed, in divided daily doses.

How Supplied: Tofranil-PM, brand of imipramine pamoate: Capsules of 75, 100, 125 and 150 mg. (Each capsule contains imipramine pamoate equivalent to 75, 100, 125 or 150 mg. of imipramine hydrochloride.)
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For complete details, including dosage and administration, please refer to the full prescribing information.

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Drug Stability and Packaging

The Significance of Expiration Dating on Original Containers and Repackaged Prescriptions

by Ralph F. Shangraw, Ph.D*

Last year the Maryland legislature passed a bill, later signed by the Governor, which requires that a pharmacist affix to the label of the container in which the medication is sold or dispensed the expiration date of the medication if known, and appropriate special handling instructions regarding proper storage. This law has resulted in a great deal of confusion about the significance of expiration dates when transferred from the manufacturers' package to the dispensing container. The purpose of this paper is to explore the scientific basis of expiration dates and to present guidelines to the pharmacist for fulfilling legal responsibilities.

There are many different definitions of an expiration date. However, the U.S.P. XIX defines it as a date assigned for a particular formulation and package of an article which identifies the time during which the article may be expected to meet the requirements of the Pharmacopeial monograph provided it is kept under the prescribed storage conditions. The important points of this definition are: a) Particular formulation, b) Particular package, c) Stored under prescribed storage conditions. By this definition an expiration date is meaningless unless all three of these conditions are controlled.

Although an expiration date is a finite date, it must be realized that a drug product (an active ingredient in a finished form to be administered to the patient) does not suddenly go "bad" on its expiration date. Theoretically, any drug product begins to deteriorate from the time it is manufactured. The rate of deterioration varies from one product to another. For instance, rates of degradation are known to proceed much more rapidly in solution than in a solid state. Therefore, liquid dosage forms are known to decompose more rapidly than capsules or tablets. Some drugs, due to their inherent chemical properties (such as biologicals and antibiotics), are much more unstable than others.

The expiration date placed on the container is the date by which the manufacturer can no longer be assured that the product will meet the requirements specified in official compendia. In most cases this is thought of in terms of potency, i.e., that the tablets, capsules, elixirs, etc. contain not less than 95% nor more than 105%, or not less than 90% nor more than 100%, etc. of labeled potency. However, the expiration date is also applicable to other standards which might appear in a given monograph such as disintegration time, dissolution rate, content uniformity, etc.

Each manufacturer is responsible for carrying out experiments to ascertain within what time period a product in a specified container stored under prescribed storage conditions will meet compendial standards. In most cases expiration dates are assigned conservatively (a shorter time period than would be predicted by experimentation) in order to assure that any unit of that product in any stage of distribution will meet the standards.

In addition to standards set by the U.S.P., the FDA has also clearly stated a position on expiration dates as a part of Good Manufacturing Regulations.

In the January 15, 1971 Federal Register, 21 CFR 133.14 was amended to read:

122.14 Expiration dating.

To assure that drug products liable to deterioration meet appropriate standards of identity, strength, quality and purity at the time of use, the labels of all such drugs shall have suitable expiration dates which relate to stability tests performed on the product.

(a) Expiration dates appearing on the drug labeling shall be justified by readily available data from stability studies such as described in 133.13.

(b) When the drug is marketed in the dry state for use in preparing a liquid product, the labeling shall bear expiration information for the reconstituted product as well as an expiration date for the dry product.

In the Preamble to the regulation, the FDA stated: "The Commissioner of Food and Drugs concludes that the interests of consumers must be served by the establishment of valid expiration dates for all drug products. To allow time for the orderly accumulation of data to support such dating, CFR 133.13 and 133.14 have been changed to set forth basic guidelines for stability studies for all drugs, which studies will be used to establish expiration dates. **No drug container-closure system is indefinitely stable and the manufacturer or packer of a drug product is responsible for determining the stability characteristic for each of his products** (emphasis added)."

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*Professor and Chairman of the Department of Pharmacy, University of Maryland School of Pharmacy.

It is clear from the above discussion that the expiration dates placed on containers by a manufacturer are applicable only when the product remains in the original container, and is stored under prescribed conditions. Even in the case of reconstituted products the expiration date assumes that the reconstituted product is dispensed in the manufacturer's container.

The question arises whether expiration dates can be transferred from one type of container to another. The evidence is quite clear that they cannot. It is a well known fact that prescription containers, particularly plastic vials used for repackaging solid products, do not presently meet compendial standards for "tight" or "well closed." As a matter of fact, the U.S.P. has recently extended to April 1, 1977 the requirement that prescription containers meet the permeation standards for "tight" and "well closed" as determined by procedure specified in N. F. XIV (page 888) and U.S.P. XIX (page 647).

Because manufacturers determine stability only in the containers in which they package their products and because prescription containers used today do not meet specified standards for moisture or oxygen permeability, the transferring of expiration dates has no scientific basis.

The argument is often given that many drug products are quite stable regardless of the container in which they are stored and they would be stable in dispensing prescription containers as well as the original containers in which they are packaged. This is true for many drug products, but unfortunately there is no easy means of identifying them. Therefore, indiscriminate repackaging is risky.

Another complicating factor of expiration dating is that it is impossible to assure that labeled storage conditions will be followed once the container leaves the pharmacy. The most common prescribed storage condition is controlled room temperature (15 to 30°C or 59 to 86°F). In addition, it is always advisable to store medication at low humidity levels as moisture is the single most important factor in accelerating chemical decomposition. As consumers often store drugs in medicine chests in the bathroom where the highest temperature and humidity conditions are known to exist, prescribed storage conditions are often exceeded. This problem exists to a greater degree when the drug is repackaged because the prescription containers do not meet the standards of moisture permeability.

The Maryland law reads that the expiration date must be transferred "if known." It is clear that once the drug product has been placed in another container the expiration date is no longer known.

On the basis of the above discussion the following recommendations would seem to be valid guidelines for pharmacists to follow:

1. For all products dispensed in original containers, the stated expiration date should be retained on the label of the container as well as appropriate storage instructions. If the original label is removed for some reason in the dispensing process, then the original expiration date and storage conditions should be transferred to the new label.

(Continued on Page 31)

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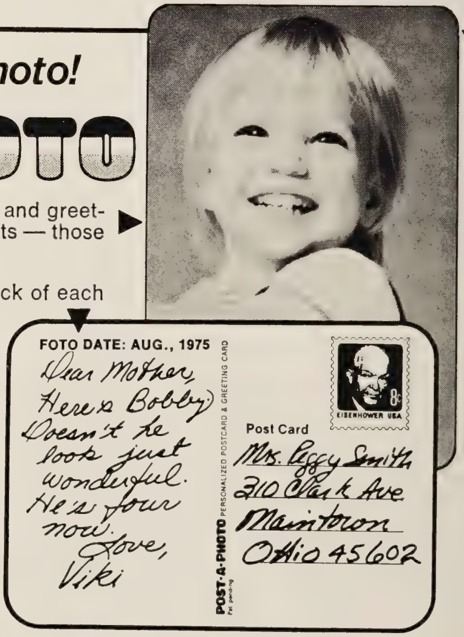

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A Comparison of Ibuprofen, Fenoprofen, Naproxen And Tolmetin Against Existing Drug Therapies

by Michael D. Brown, R.Ph.*

Recently, four new drugs have been placed on the market for the treatment of rheumatoid arthritis — ibuprofen, tolmetin, fenoprofen and naproxen. What follows is an attempt to describe the disease process, the pharmacological treatments, and the place which these new agents may occupy in the therapy of the disease.

Rheumatoid Arthritis

This affliction occurs in one to three per cent of the population, with women afflicted two to three times more often than men. Onset usually begins between ages thirty to fifty. An inflammatory process of unknown origin, it may be limited to a single episode affecting a few small joints on both sides of the body, lasting only a matter of weeks (10-20% of cases). Usually, however, the condition is progressive, with intermittent acute episodes, and of a degenerative nature which affects an increasing number of joints, the bones which they connect, and the vessels and nerves which serve them. Finally, distant organs are affected — liver, lungs and heart.[1]

Treatment of the initial stages of the disease is limited to analgesics and physical therapy, allowing the illness to run its course. This attempts only to minimize the discomfort involved.

Chronic disease involves therapy aimed at manipulating the host's immune mechanisms. One group of researchers contends that the problem lies in the host's inability to marshal sufficient and appropriate immunological responses to deal with the unknown cause. They therefore attempt to use drugs which stimulate these responses (such as levamisole).[2]

The majority of therapeutic measures involve attempts to suppress the host immune systems, theorizing that until the cause of the disease and its cure are discovered, the best treatment is to minimize damage caused to the host by its own ineffectual immune system.[2]

It is this second school which employs the agents to be cursorily discussed here. These new drugs have evolved in order to circumvent the toxicities inherent with the older agents — aspirin, indomethacin, phenylbutazone, even low-dose steroids. The more drastic agents — gold, penicillamine, and the cytotoxics (those agents also employed in cancer chemotherapy) are used only in fairly advanced disease, where their extraordinary toxicities may be overshadowed by the desperate state of the severely debilitated patient. These drugs will not be discussed here.

Of the first four drugs mentioned, aspirin is generally conceded as first choice therapy. Phenylbutazone and indomethacin offer insignificant advantage therapeutically, and are much more dangerous. Steroids are more effective than aspirin, but possess too many side effects to be considered as first-choice therapy, including some affecting the disease process itself, such as bone degeneration, as well as physical and psychological properties of addiction.[3] Any comparisons to be made with the older drug agents will primarily be made with aspirin.

Characteristics of Aspirin And the New Agents: Advantages, Relative and Absolute, Vis a Vis High Dose ASA

All four new agents offer these advantages over high-dose aspirin:

1. Significant decrease in gastrointestinal disturbances
2. Significant decrease in auditory side effects — tinnitus, hearing impairment
3. Novelty — as prescription drugs they may give the patient the feeling that the physician is doing more than the patient can do for her/himself with an OTC (placebo effect should not be dismissed lightly in a disease process of an episodic and pain-predominated nature).

These advantages alone might be sufficient for better control of the disease process, through better patient compliance.

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*Staff Pharmacist, The Johns Hopkins Hospital.

Drug	Peak Level (hours)	Half-Life (hours)	Plasma Binding (% albumen)	GI Distress	Auditory Disturbance (%)
Ibuprofen [4] [5]	.75–1.5	2	90	10–20	3
Tolmetin [6] [7] [8]	.3–1	0.8	99	10	3
Fenoprofen [9] [10]	.5–1	2.3–3	99	20	6–10
Naproxen [11] [12]	.3	11–20	99	10	8
Aspirin [13] (high-dose)	2	4–30	50–70	20–41	40

For the patient experiencing GI difficulties with aspirin, any of the other agents might be employed, with the last choice probably being fenoprofen. Frank ulceration has been implicated in naproxen therapy, and is possible with the others, so that close monitoring with any is advised. If GI upset occurs with any of the new drugs, any other might be tried, since cross-tolerance appears minimal.[14]

The rheumatoid patient is often titrated initially to a dose which causes tinnitus, and is then minimally reduced.[15] As a consequence, auditory complications are frequent, since anti-inflammatory activity and hearing difficulty both occur at relatively the same dosage range with aspirin, with plenty of inter-patient overlap. If the patient complains of this, it can be seen that either ibuprofen or tolmetin might be reasonable alternatives.

Other Complications With The New Agents

Depressed patients would probably be better off without tolmetin, which, because of its chemical relationship to indomethacin, has the highest incidence of psychological side effects.[16]

Concommitant anticoagulant therapy is an indication for initial trial with ibuprofen, which on the basis of one study does not seem to interfere with the actions of warfarin.[17] The high protein binding capacity of the other agents theoretically, at least, should interfere with the sojourn of the anticoagulant in the plasma, prolonging clotting time by displacing more active drug into the system. Phenylbutazone shares this trait as well.[18] As for aspirin, its role in this condition has been discussed elsewhere *ad nauseum*.

Fluid and sodium retention are important factors in the congestive heart patient. Tolmetin and phenylbutazone have been mentioned as agents which might add to this difficulty, and may require additional diuretic therapy as compensation.[7]

Withdrawal exacerbation of symptoms has been seen with fenoprofen and can be anticipated with the other short-lived agents, but probably not naproxen.[10] As with steroids, tapered withdrawal might be the answer.

Aspirin should not be used with the new agents, due to mutual interference. If further analgesia is required, acetaminophen or a narcotic should be used.[19]

Head to Head: The New Agents

Although blood half-life may not correlate with effect on inflamed tissue (see any good treatise on steroids), naproxen and fenoprofen both are better at relieving the morning stiffness in R.A.[14] This advantage might be overcome by bedside medication with the other two agents several hours before arising (if the patient is capable of easily returning to sleep!).

One study gives the nod to the two drugs mentioned above as far as efficacy, but due to significantly fewer side effects, actually favors naproxen.[14] But this study was of short duration and did not include tolmetin. Therefore, let us await more definitive long-range studies to say more than that all four agents offer some advantages over present regimens in this area of rheumatoid arthritis therapy.

One further caveat: side effects which show only after widespread experience have yet to be demonstrated, so that the final place for these agents is unassigned and will so remain, probably for years to come.

Additionally, although analgesic effect occurs fairly rapidly, significant anti-inflammatory activity may not appear for several months.

Acknowledgement to Natalie A. Brown, R.Ph. and Barry Means, R.Ph., M.S. for their assistance in preparing the manuscript.

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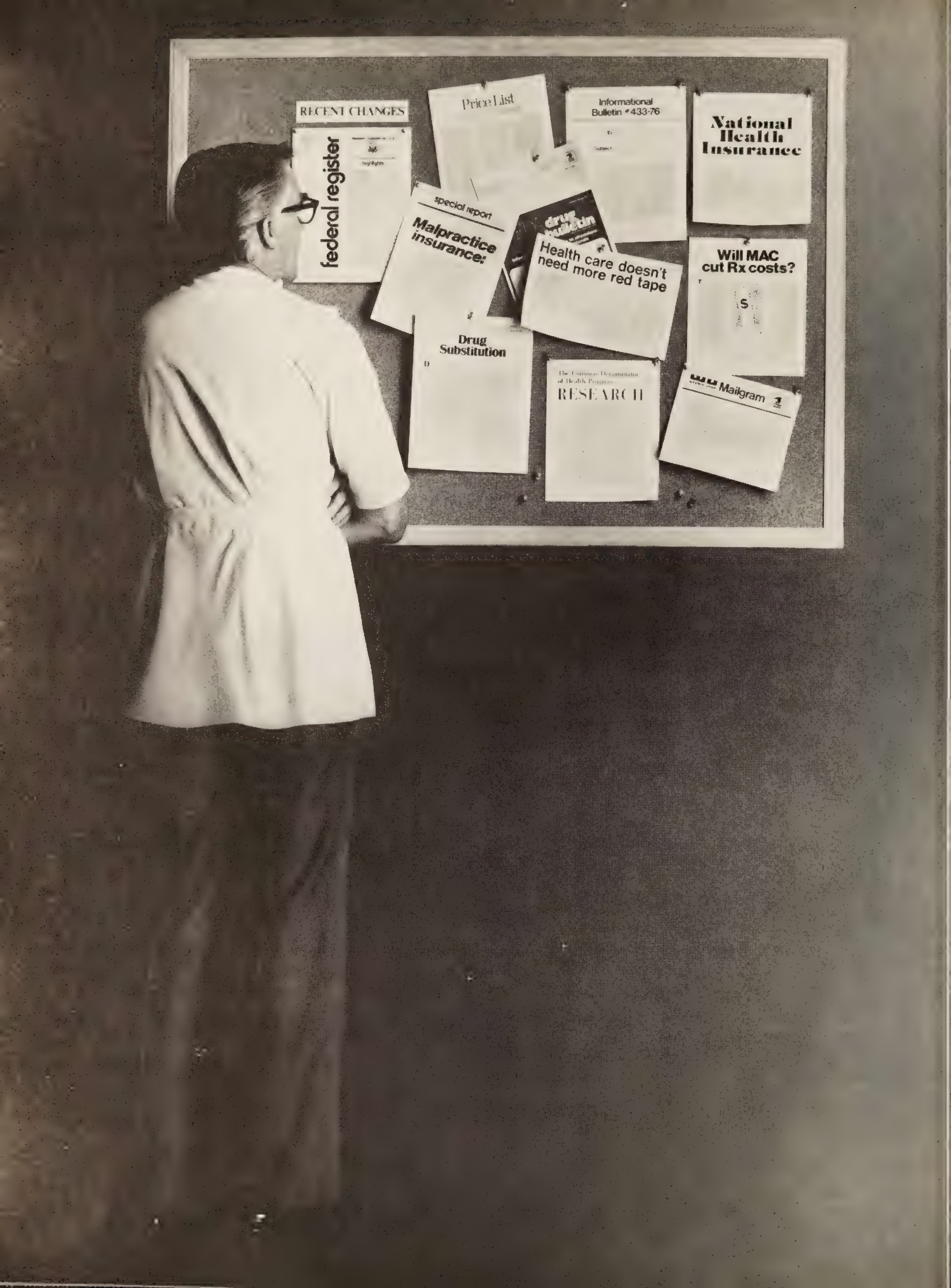
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These changes have been taking place against a background of growing evidence that purportedly-equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA has not enforced the same standards for hundreds of "follow-on" products that it has applied to original NDA approvals. This situation, it seems to us, is a compelling reason for product selection to rest on a sensible interchange between doctors and pharmacists—and not on legislative action.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant overall savings has been produced, nor is any likely, given the needs of pharmacy and the record of government in administering cost control programs.

MAC Maximum Allowable Cost, MAC for short, is a federal regulation intended to cut the government's drug bill by setting price ceilings for multi-source drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right, regardless of your economic or professional judgments. Pharmacists will have little to say about administration of the program, since government will have absolute authority to make its prices and fees stick. For other multi-source drugs on the MAC list, your reimbursement would be limited to a product price on a government "estimated acquisition cost" list and a state-established professional fee.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to patients: the cost of the research is more than ten times what it was, per product, in 1962, and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years or more now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present complex approval process contributes to needless delay of drug therapy. That's why the increased efficiency of the drug and device approval process is vital to all our futures.

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The Five Stages of Illness and Their Effect On Pharmacist–Client Communications

by Kenneth W. Kirk, Ph.D.*

There are two types of knowledge necessary to communicate meaningfully with patients: (1) knowledge about the subject matter being discussed, namely, the drug and the disease state; and (2) knowledge about the person to whom the information is being given. Emphasis typically is placed on the former type of knowledge because it is the basis for formal pharmacy education and state board licensure requirements. However, evidence indicates that unless a pharmacist knows certain things about his client, the effectiveness of his communicated drug knowledge is diminished.

Illness Behavior

Medical sociologists study the social and behavioral aspects of illness, part of which includes analyzing the various ways people react to illness. Mechanic has stated, "Much medical activity . . . requires an understanding of the cultural and social pressures which influence an individual's recognition that he needs advice, his decision whether to seek it, his choice of counsellor, his cooperation in carrying out any measures that are suggested and his willingness to remain in contact should there be any recommendation that further supervision is needed."[1]

Certainly, pharmacists must take heed of Mechanic's words because patients do vary greatly in their responses to having physicians prescribe drugs for them. This phenomenon is evident to a pharmacist every day of his practice. It can be a frustrating experience to know you have information that would help the patient, yet the patient, for some reason or other, simply does not appear interested in receiving that information. Much of this willingness or unwillingness to accept clinical information is due to the fact that people pass through different stages of illness when they suffer some type of medical malady.

A well-known medical sociologist named Suchman has divided the sequence of medical events into five stages of illness and medical care: (1) the symptom experience stage; (2) the assumption of the sick role stage; (3) the medical care contact stage; (4) the dependent-patient role stage; and (5) the recovery or rehabilitation stage.[2] The purpose of this paper is to review Suchman's five stages of illness and demonstrate the important role that pharmacists play when coming in contact with patients in any one of the stages. Knowing how and why people change their attitudes and behavior as they enter and leave particular illness stages should make pharmacists more effective in counselling patients about their drug therapy and other medical needs.

Stage 1: The Symptom Experience Stage

Entry into the initial stage of illness occurs when the person makes the decision that "something is wrong." This subjective feeling of discomfort leads to behavior that involves the pharmacist more than in any other stage of illness. There are three aspects of the symptom experience stage: (1) the physical experience, where the person feels pain or notices a rash or other type of irritation; (2) the cognitive aspects, where the person interprets the symptoms; and (3) the emotional response accompanying the physical experience and cognitive aspect of the discomfort, which can range from nonchalance to fear or anxiety.

Pharmacists need to continually remind themselves that symptoms typically are not recognized and defined by the public in medically diagnostic categories, but rather in terms of how the symptoms *interfere with normal social functioning*. For example, a sinus infection is seldom interpreted by an individual as a case of group-A Streptococcus pyogenes. Rather, it is thought of as a "bug" that's keeping one from wanting to attend the evening concert.

It is also common for people to display a general resistance or rejection of having to play the "sick role." The success with which this "denial of illness" occurs depends largely upon the degree of pain or incapacitation produced by the symptoms. This phenomenon helps explain why many chronic diseases with their insidious, or gradually worsening symptoms go untreated for so long. Perhaps the best example of such symptoms are the seven warning signals for cancer promoted continually to the public by the American Cancer Society. One might first think that people certainly would not need to be reminded of the warning signals for cancer because the consequences can be so severe. However, these seven symptoms, listed in Chart 1 below, do not cause considerable pain or incapacitation. As a result, they easily go unnoticed or ignored by an individual, oftentimes until treatment is too late.

(Continued on Page 24)

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*Associate Professor of Pharmacy Administration, School of Pharmacy and Pharmacal Sciences, Purdue University.

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4. Thickening or lump in breast or elsewhere.
5. Indigestion, or difficulty in swallowing.
6. Obvious change in wart or mole.
7. Nagging cough or hoarseness.

Chart 1: Cancer's Warning Signals!

Pharmacists should recognize this human tendency to reject being sick and actively cooperate with promotional campaigns of various health agencies and organizations in their communities, such as the American Cancer Society. They should provide information to their clientele and encourage them to follow through with physician visits at the first sign of potentially serious symptoms. Evidence shows the public needs these continual reminders.

Another aspect of the symptom experience stage is the recognition that people oftentimes are torn between two opposing developments after they first discover symptoms: (1) they do not want to bother the physician, or to have to wait in a physician's office; but (2) they fear the consequences of waiting too long to see the physician. As a result of this inner-conflict, the individual often attempts self-treatment with over-the-counter medications.

Thus, the pharmacist can serve as a bridge to help the person decide whether or not the symptoms warrant seeing a physician. This, of course, assumes the pharmacist is involved with OTC drug transactions in his pharmacy even if it involves merely a brief encounter with the client when the sale is made by a clerk. Preferably, the pharmacist would meet with the client when the client first requests an OTC drug, but this is not always possible when the pharmacist has other clients waiting for prescriptions to be dispensed. The client, incidentally, likely will be interested in any consultation with the pharmacist because he probably has this inner-conflict which he has not been able to settle himself.

One other important point to make is during this initial stage of illness, the pharmacist probably is the only health professional with whom the individual comes into contact to discuss the symptoms. Unavailability of a pharmacist typically results in the person seeking the advice of a neighbor, working companion, family member, or advertisements appearing in magazines and on radio and television. Too often, the pharmacist undersells his importance at this stage of illness which to many, seems like a rather unimportant or insignificant stage for the pharmacist to be involving himself. Nothing could be farther from the truth.

Stage 2: The Assumption of the Sick Role Stage

This second stage of illness is where the person makes the decision that he is sick and needs professional care. The individual seeks to validate his claim of being ill which, if accepted, will excuse him from his normal social obligations and activities. During this stage, the reaction of the person's family and employer become very important because without the moral support of these other people, the individual probably will not follow through with plans to see a physician until the symptoms become more severe.

An additional element of great importance during this illness stage is whether OTC drugs, purchased during the symptom experience stage, have brought about a change in the symptoms. If an OTC drug has relieved or lessened the symptoms, the person might delay advancing to the third stage of illness. During this delay, the disease may reach more serious proportions. Any pharmacist recognizes the potential consequences of inappropriate OTC drug therapy. Since the *only* purpose of OTC drugs is to relieve symptoms, rather than to cure disease, *the biggest danger of such drugs is they can mask symptoms that otherwise would alert the individual that he should see a physician.* A pharmacist noticing a client purchasing an OTC antacid on a regular basis, for example, should inquire into that person's state of health. Many people "hide ulcers" by "covering them up" with antacids which may temporarily relieve symptoms, but do nothing to cure the ulcer. Eventually, the antacid may have little or no effect in reducing the physical discomfort at which time the ulcer probably will have progressed to where the individual will require extensive medical treatment.

Stage 3: The Medical Care Contact Stage

This third stage of illness is where the decision is made to seek professional medical care. More explicitly, the individual is seeking both a medical diagnosis and a prescribed course of treatment. The initial medical diagnosis sets the stage for subsequent medical care. The person might refuse to accept the diagnosis and search for another source of medical advice, possibly someone whose diagnosis will "agree" with the self-diagnosis made by the individual.

A pharmacist should be careful about agreeing with a client who is describing and diagnosing his own symptoms because such a person may be seeking assurance that he is right and the physician whom he has just seen is wrong. It is easy for a pharmacist to ignore these people, particularly when prescriptions are waiting to be dispensed and the person is talking to the pharmacist while the pharmacist is attempting to prepare a prescription for another client. Oftentimes, the easiest response to such a person is simply to agree with whatever is being said in hopes that the person will be on his way and let the pharmacist concentrate on his prescription dispensing. However, a pharmacist should do his best to prevent this from happening because he may become an unwilling accomplice in encouraging the person to ignore what his physician has diagnosed and to rely instead on his self-diagnosis which has been "confirmed" by the knowledgeable, community pharmacist.

It should now be evident that when a person seeks consultation with a pharmacist regarding OTC drug therapy, it is vitally important for the pharmacist to first determine in what stage of illness the person is. Questions which the pharmacist should attempt to have the individual answer include the following: (a) Has the individual just discovered his symptom? (b) Is the person dissatisfied with his physician's diagnosis? and (c) Is the person discouraged from having followed the physician's or-

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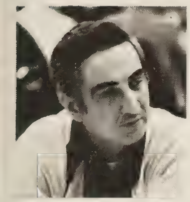
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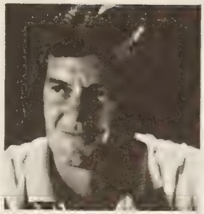
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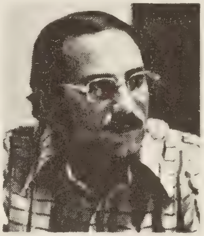
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ders for some time seemingly with no results? A pharmacist's approach with a client will differ depending upon the stage of illness through which the client is passing. Proper advice for a person in the first stage of illness may be inappropriate and possibly harmful for another person in the third stage of illness.

Stage 4: The Dependent-Patient Role Stage

This fourth stage of illness is where the decision is made to transfer control to the physician and to accept and follow the physician's prescribed treatment. Technically, it is not until this stage that the person becomes a *patient*. The acceptance of patient status is not easy for most people in our society.

People tend to avoid this dependent-patient role, but they accept it when they see it as the only possible way they can return to their normal social activities.

An important difference between hospital and community pharmacy practice might be made at this point. Studying hospitalized patients represents a "biased" sample of the population because these people have proceeded through three of the five illness stages. It is somewhat easier to predict how these people will behave, particularly because drug therapy and other medical treatments are administered to them by hospital personnel. In community practice, on the other hand, a pharmacist is exposed to people in each of the five stages and it is important for the pharmacist to be able to determine the appropriate approach for a person in a particular stage.

It also is in this dependent-patient role stage where many social and psychological barriers can interfere with the proper course of treatment. Any breakdown in the physician-patient relationship can result in the patient digressing to one of the previous stages of illness. Dissatisfaction with a physician's treatment results could lead a patient to seek the counsel of less qualified medical practitioners or even to see medical "quacks." Evidence of this phenomenon is seen in the millions of dollars spent annually by those unfortunate people who purchase the myriad of "cancer cures" available from disreputable people whose sole purpose is profit-making at the expense of seriously ill patients.

Pharmacists must, therefore, accept the responsibility of helping patients follow a physician's prescribed treatment. Noncompliance is being recognized today as a serious problem and one which pharmacists can readily detect through the proper use of patient drug profiles.[3] A change in the time period between refills on maintenance medications or a sudden change of prescribing physicians should alert the pharmacist to the possibility that a conflict exists between the patient and the physician. The pharmacist should attempt to determine if such a conflict does exist and if so, take immediate and appropriate action to see that the patient continues on the proper course of therapy. It is easy for chronically ill patients to become discouraged periodically, and the pharmacist can play an important role in assuring such people that their therapy is helping them and that failure to follow the prescribed treatment could lead to a drastic change in their health status.

Stage 5: The Recovery or Rehabilitation Stage

During this stage the patient makes the decision to relinquish the patient role and either resumes his role as a healthy individual or adopts a new role of chronic invalid or long-term patient needing rehabilitation. With the increasing incidence of chronic diseases, public health concerns of these patients need more attention by all health practitioners. Among these public health concerns are home care for the aged, rehabilitation for the handicapped, and long-term care for the chronically ill.

Pharmacists have numerous opportunities awaiting them through their involvement in providing pharmacy services to nursing home residents. A recent article by Brown in another journal explored the federal regulations that now exist for pharmacists serving in skilled nursing facilities.[4] These regulations give pharmacists responsibilities far beyond the mere dispensing of prescription drugs. Pharmacists have a needed role to play in assuring that quality pharmacy services are provided to this often neglected segment of our society.

Pharmacists also come into contact with patients who have just learned they will be taking some type of prescription drug therapy for the rest of their lives. This experience can be difficult for a patient to accept, and the pharmacist can do much to alleviate the initial fear and anxiety that occurs when a patient learns he has a chronic ailment requiring maintenance drug therapy of some type. The initial acceptance of such a condition could well determine whether the patient will comply with the prescribed treatment, or retreat into other stages of illness in search of another diagnosis or another "solution" to the problem.

Summary

The pharmacist probably is the only health professional who comes into contact with people in each of the five stages of illness. This puts him in the important position of being able to help and counsel people with all types of medical needs. However, a failure to recognize clients in particular stages of illness can result in the "right advice being given at the wrong time." A pharmacist must take the initiative in obtaining specific information from a client, whether that client has a prescription or is searching the shelves for an OTC drug product. Each client should be viewed as a unique individual with unique needs which can only be identified by communicating one's interest and concern for that individual. Knowledge of the five stages of illness will help the pharmacist communicate more effectively and meaningfully with his clientele.

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Letters to the Editor

Dear Sir:

I read with interest Ms. Love's article concerning skin tests for anergy in the Jan./Feb./Mar. issue of *The Maryland Pharmacist.* However, I feel that a significant error has been made regarding the stability of Streptokinase-Streptodornase test solutions. Ms. Love states that, "the test solution is stable after reconstitution for 12 months if refrigerated." Personal correspondence with the manufacturer (enclosure) indicates that stability can only be guaranteed for *one week* following reconstitution and refrigeration. This may have grave therapeutic implications since the validity of the test may be suspect if outdated test solutions are used. I suggest that a correction is indicated.

Sincerely,
Robert J. Michocki, M.S.
Assistant Professor,
Clinical Pharmacy
Division of Clinical Pharmacy
University of Maryland,
School of Pharmacy

Editor's note: The following letter was sent to the Division of Clinical Pharmacy, University of Maryland School of Pharmacy from Lederle Laboratories.

Refrigeration is definitely required for VARIDASE® Intramuscular Streptokinase-Streptodornase before it is reconstituted for use and it should be kept in a refrigerator after reconstitution when not in use at 36°–50°F. It will then remain stable for one week. At room temperatures, preparations will not remain stable for more than 24 hours.

We do not have an official indication for use of VARIDASE as a skin test. Reports in the literature indicate that VARIDASE has been used for this purpose. I am listing below references for several published articles in which the authors report this use of VARIDASE. VARIDASE could not be marketed in a form suitable for skin testing without elaborate clinical trials to establish its reliability for this indication.

According to the reports in the literature, VARIDASE Intramuscular was used diluted to contain 50 to 100 SK units per ml. 0.1 ml. was administered intradermally.

VARIDASE was used with a series of other skin tests, namely antigens to which the probability of patient sensitization is high (e.g., mumps vaccine, tuberculin, histoplasmin, candidin, trichophytin, etc.). It is not likely that a patient with unimpaired cellular immune competence would not develop a delayed skin reaction to at least one of these antigens, and more than 99% of normal individuals will give a reaction to at least one of the antigens.

Very truly yours,
Stephen A. Szumski, Ph.D.
Medical Advisory Department

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Open Forum

I, like the majority of pharmacists and pharmacy owners, wa apathetic for the past several years. Disgusted with what ha happened and what was happening, I went my own way. refused to pay my dues to the associations and participate i their activities. I refused to be active for two reasons: first, asked myself what value could one person be; second, I knew my ideas and suggestions would meet much opposition. Like the rest of you, I went my own way, complaining to myself and friends, until I was struck by a bolt of lightning called MAC.

It became inevitable that I had to become involved and fight in order to preserve my future livelihood. I paid my dues, made contributions, and worked with the Association. I was elated to learn that the officers in the Association welcomed my help and had open minds. I joined others who felt as I had in the past, and by working with them and the Association found the nucleus of a strong and dedicated, determined team.

The new group together with the Association achieved success heretofore unheard of in pharmacy. I must state however that these gains are not permanent and much remains to be done in order to insure our future. One outstanding fact has been proven. It can be summed up in that old adage, "In unity there is strength". If any of you still think you can sit on the sidelines and ignore the problems we are confronted with, you will have only yourselves to blame when you close the doors to your pharmacies for the last time.

Our survival is dependent upon each and every member becoming involved personally and fighting for what is justly ours both as individuals and as a profession. If you want to be honest with yourself take the time today to determine your actual cost of filling a prescription. You will be shocked to learn that you have been providing a professional service at your own expense.

If in the future it becomes necessary for pharmacies to close because they could not provide needed health services at their own expense, just look around and see who did not become involved in this fight for survival. There will be no doubt upon whom the blame should fall.

Donald Schumer, R.Ph
Baltimore, Maryland

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Baltimore Metropolitan Pharmaceutical Association

The Baltimore Alliance Against Venereal Disease expressed its appreciation to the Baltimore Metropolitan Pharmaceutical Association for its financial contribution and to Richard Schulz who represented BMPA at the Alliance's booth at the Baltimore City Fair. Mr. Schulz devised a veneral disease self-test which was distributed to those who visited the booth.

Future work between these two groups will maximize the pharamcists' input in the area of venereal disease information and education.

Burroughs Wellcome Announces Local Winner

Richard E. Greenberg, R.Ph., of Baltimore is one of 104 national winners in the "Win A Student Loan" contest sponsored by Burroughs Wellcome. The $500.00 award was presented to Dr. William J. Kinnard, Ph.D., Dean of the School of Pharmacy, and is to be used as a revolving loan fund for deserving students in the name of Mr. Greenberg.

From left to right: Ray Smith, local representative; Alex Cradle, District Sales Manager; and Richard E. Greenberg of Vilma Pharmacy.

Noxell Appoints Group Product Manager

Noxell Corporation of Baltimore, Maryland, has announce the promotion of Philip C. Crosland to the position of Grou Product Manager for the Toiletry/Household Products Marke ing Division. In his new post he will be responsible for the ne Raintree line and Lestoil.

Mr. Crosland, formerly New Products Manager in the Co metic Products Marketing Division, joined Noxell in 1974. Hi previous affiliations were with Ted Bates Advertising and SSC& Advertising, both in New York City.

Mr. Crosland holds a B.B.A. in Marketing from the Universit of Wisconsin.

James E. Allen, Jr. Elected Executive Vice President Of Gilpin

The election of James E. Allen, Jr. to the office of Executive Vice President has been announced by The Henry B. Gilpin Company, a major distributor of drugs and health care products, headquartered in Washington, D. C. Mr. Allen is responsible for the direction of all corporate and subsidiary operations.

Prior to joining Gilpin in 1974 as Vice President of Planning and Development, Mr. Allen established a broad base of experience in industrial and business management, as well as sales and marketing management, with the firms of Procter & Gamble, IBM, and Memorex. Mr. Allen is a graduate of the Massachusetts Institute of Technology.

The Henry B. Gilpin Company, which was founded in 1845, and its subsidiary companies operate six wholesale drug distribution centers and surgical supply, service merchandising, and drugstore franchising businesses located throughout 13 eastern, midwestern, and southern states, and the District of Columbia.

School of Pharmacy

Dr. Larry L. Augsburger of the University of Maryland School of Pharmacy has been awarded a $46,440 14-month contract from the Food and Drug Administration (FDA) to develop a laboratory dissolution method/specification that meets the regulatory need for assuring uniformity of bioavailability (clinical effectiveness) from lot to lot and from different manufacturers of the thiazide diuretics.

Drugs with poor solubility (such as the thiazides) are not always released from dosage forms in an efficient manner. Various factors including the physicochemical properties of the drug itself and how the dosage form is formulated and processed can significantly affect the dissolution of the drug from its dosage form.

)rug Stability *(Continued from Page 16)*

. In those cases where the drug product is repackaged, the original expiration date should be considered invalid. The pharmacist may, if he wishes, place an arbitrary expiration date on the label (not to exceed one year) in order to prevent use after long periods of time in uncontrolled circumstances.

:. The pharmacist should recommend the same storage conditions for repackaged drug products as were required on the original container. This should in most cases be optimal for the product under most repackaging conditions.

A number of forces are presently in motion which will result n little or no repackaging by the pharmacist. In addition, tighter standards for dispensing containers will be in effect April 1, 1977. In the meantime, the above recommendations would appear to conform with the spirit of the law within the limitations of being both practical and scientifically sound.

Prescription Cost *(Continued from Page 12)*

Table 1 — Type of Practice of Participants (n=54)

	n	%
Professional Pharmacy	13	24.1
Traditional Pharmacy	37	68.5
Super Self-Service Pharmacy	4	7.4

Analyzing only the professional shop and the super self-service (the traditional type of practice would have statistics very close to those reported for the whole group) the weighted average costs are:

	Average Prescription Volume	Weighted Average Cost
Super Self-Service	28,500	$2.55
Professional Shop	37,923	3.076

Discussion

Very little should be inferred from a sample of 54 out of a population of 800, especially if today's research will become tomorrow's State dispensing fee.

The cost of filling a prescription is a highly emotional political question which won't be solved by objective research. The pharmacist can't win and *may*, in the process, cut his own throat! So, no matter who collects the data, Lasser or Leavitt, the results will produce only more numbers and each can guess their correlation with actual cost.

As long as government insists on analyzing prescription prices, a subsection at a time, MAC, EAC, dispensing cost, etc. and never gets down to ensuring some level of net profit along with the other elements, there is very little hope of coming up with actual dispensing costs.

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12:00 Noon	Lunch Speaker: **WILLIAM E. WOODS,** newly elected Executive Director, NARD (Na tional Association of Retail Druggists) — "The National Scene — What' the Outlook for Independent Pharmacy?"
2:00 P.M.	"Maximizing Front End Profits — The Role of Fixtures, Traffic Flow and Produc Placement." **TED GLADSON,** Design and Merchandising Consultant to NARI and President, PE Systems, Chicago.
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3:30 P.M.	Discussion and conferences with speakers and panelists.

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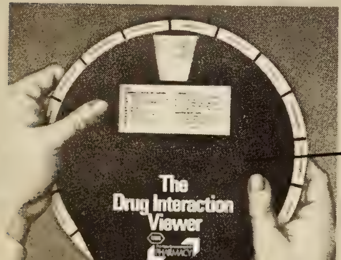
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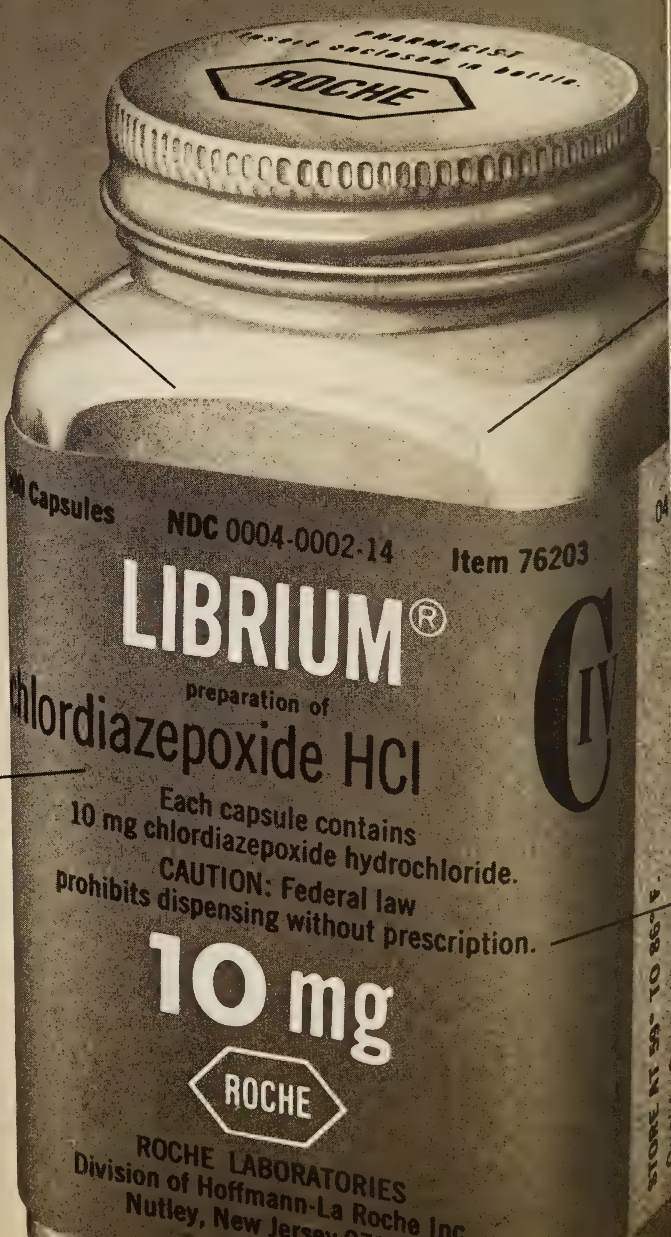
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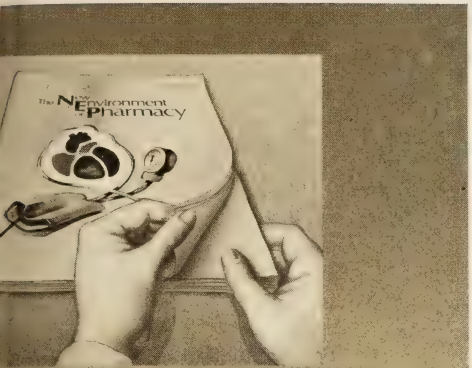

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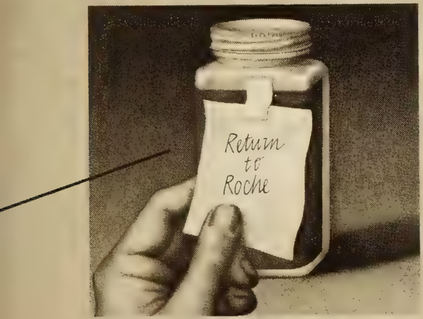

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Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

> **_Usage in Pregnancy:_ Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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editorial

COMPETENCE FOR ALL PHARMACISTS— "CLINICAL PHARMACY" AS STANDARD OF PRACTICE

The issue of recognition of "clinical pharmacy practice as a specialty" has been strenuously debated for some time. The American Pharmaceutical Association's Academy of Pharmacy Practice (APP) has established a "Section on Clinical Practice" and the section's officers are considering the advisability of petitioning the Board of Pharmaceutical Specialties for recognition.

Wouldn't the profession of pharmacy and the public interest be better served at this time by working for the establishment and implementation of standards of practice that include most of what is being advanced by many as "clinical pharmacy"?

Gary W. Cripps, Pharm.D., Chairman, APP Section in Clinical Practice, has focused on this as follows:

> Most would agree that the functions of clinical pharmacy practitioners in community, hospital, and organized health care settings should include the following:
>
> 1) Obtaining and maintaining a patient data base for use in making pharmaceutical decisions affecting patient care;
>
> 2) Advising the patient on OTC drug therapy;
>
> 3) Consulting with physicians about therapeutic goals and end points, appropriate drug therapy, and product selection;
>
> 4) Counseling patients about the proper use of prescription medication;
>
> 5) Referring patients to appropriate health care personnel based upon problem assessment;
>
> 6) Safely dispensing, distributing, and administering medications to patients;
>
> 7) Identifying toxic manifestations of drugs and taking appropriate action;
>
> 8) Serving as a source of health and drug information for patients and other health professionals;
>
> 9) Conducting drug utilization review programs within their practice area;
>
> 10) Carrying out programs to ensure patient compliance; and
>
> 11) Monitoring drug therapy to detect, correct, and prevent drug-related problems, including: drug interactions, adverse effects, IV incompatabilities, drug altered laboratory values, contraindications, misuse, abuse, noncompliance, inappropriate therapy, and therapeutic failures.
>
> It is clear that by providing these services — services that are the general basis for clinical practice intended to help ensure safe and effective drug therapy for patients — pharmacists can meet the needs of their patients and make a positive contribution to health care.
>
> Thus the major consideration appears to be, *should not these services be a component of all pharmacy practices rather than the basis for specialization?* This question is place into even sharper focus when one considers that existin *undergraduate* pharmacy educational programs are now striving to develop these *very same capabilities* in *all graduates!*
>
> Although there should be clinical as well as management and technical aspects in all pharmacy practices, there are pharmacy practitioners whose major efforts and responsibilities primarily involve clinical functions and actitivies. Where this is true, and the services are directed at a specific patient type or a specific function, then there would more likely exist a basis for specialization. Examples might include pediatric pharmacy, mental health pharmacy, drug information, nuclear pharmacy, and primary and maintenance care in organized health care settings.
>
> Many arguments can be made for and against specialization of clinical practice on the basis of *special interest* versus a specialty *per se* when one considers the Board of Pharmaceutical Specialties' criteria and guidelines concerning need, demand knowledge base, specialized functions, education and training, numbers of practitioners, and time spent in activity. While these considerations are being debated and deliberated, should not our major effort be directed toward promoting and developing these basic clinical services as *standards of practice* based on competence for all pharmacists, rather than as the basis for specialization? Furthermore, might not specialization even *deter* the expansion of the use of these concepts in *every* pharmacy practice?
>
> There are obviously a number of unanswered questions about whether or not clinical pharmacy *per se* deserves recognition as a pharmaceutical specialty; but whatever the eventual answers may be, those areas *within* clinical practice which meet the Board of Pharmaceutical Specialties' criteria for recognition of a specialty should be identified and practitioners encouraged to seek specialty recognition.[1]

Perhaps suitable recognition for these pharmacy practitioners who demonstrate competency in providing pharmaceutical services based on meaningful standards of practice should be the goal of organized pharmacy. An important end result could be of practical concern: the realization of the value of such "clinical" services and equitable compensation to the pharmacist providing such services.

— *Nathan I. Gruz*

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[1] Gary W. Cripps, Pharm.D., "Is Clinical Pharmacy Practice a Pharmaceutical Specialty?," American Pharmaceutical Association Academy of Pharmacy Practice, *Pharmacy Practice.* Vol. 11 (No. 10), October, 1976. pp. 2, 3.

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DRUG EVALUATION

OXYBUTYNIN CHLORIDE

by John Hoopes, Pharm.D.*

INDICATIONS:

Oxybutynin chloride (Ditropan®) is indicated for the relief of symptoms associated with voiding in patients with uninhibited neurogenic (UNB) and reflex neurogenic bladder (RNB).†

Absorption, Distribution, Metabolism, Excretion:

Oxybutynin chloride is rapidly and efficiently absorbed from the small intestines as are other tertiary amines. It reaches peak serum levels at approximately two hours. It is extensively metabolized, the extent varying with the animal studied. In the dog, only 1% is recovered unchanged in the urine in 48 hours (1). Kinetic data in humans are not available.

Pharmacology:

Oxybutynin is a tertiary amine having qualitatively different effects than other anticholinergic agents. Animal studies indicate that oxybutynin is considerably less potent than atropine in cholinergic-induced hyperactivity of the jejunum, colon and detrusor muscle. Fredericks et al (2) found it to be $^{1}/_{13}$ as potent as propantheline and ¼ as potent as atropine. Similarly it is less potent than atropine in suppression of salivary and gastric acid secretion, as a mydriatic, as a cardioaccelerator and its central nervous system effects (1).

Oxybutynin is, in vitro, twice as potent as atropine in inhibiting morphine-induced spasms of the colon and 10 times more potent in the inhibition of barium chloride-induced spasms of the detrusor muscle (1, 2, 3). When compared to propantheline, oxybutynin has been shown to be twice as potent in inhibiting barium chloride-induced spasm of rabbit detrusor muscles (2).

Oxybutynin has been shown to have analgesic potency equivalent to aspirin in the rat acetic acid stretch test, and a local anesthetic activity on the rat cornea twice that of lidocaine (1, 3).

CLINICAL STUDIES:

Diokno and Lapides (4) reported a beneficial effect of oxybutynin (5 mg. twice daily) in controlling the symptoms of urinary frequency, urgency and incontinence associated with UNB. Cystometrograms of patients treated with oxybutynin compared with propantheline showed equivalent responses. The response from oxybutynin was of a longer duration. Patients with urethralgia and vesicalgia secondary to infection, irradiation, and transurethral resection experience symptomatic relief from oxybutynin. No changes in liver function tests, kidney function tests or in the hematopoietic system were noted in patients treated for months (exact length of study was not stated).

The remainder of clinical studies available for review on the antispasmodic activity of oxybutynin in the treatment of neurogenic bladders comes from the manufacturers (3). Their studies demonstrate a statistically significant difference in the cystometry results of patients with UNB or RNB on oxybutynin (5 mg. t.i.d.) as compared to those treated with propantheline (15 mg. t.i.d.). The results of cystometry indicate an improvement in mean bladder volume at onset of first contraction, in mean bladder volume at end of cystometry, and in mean bladder volume at first desire to void. Their studies further demonstrate a statistically significant difference in favor of oxybutynin over propantheline in the response of pain, urge incontinence, and nocturia.

Similar results have been demonstrated in children with UNB or RNB comparing oxybutynin (5 mg. twice daily) to placebo. Five children previously treated unsuccessfully with imipramine or propantheline were also included in the study. All children experienced a reduction in daytime frequency and incontinence. Nocturnal incontinence and frequency were similarly affected.

Anticholinergic side effects are experienced with oxybutynin despite its low activity in this regard. They appear to be lower in frequency than what would be expected from equipotent doses of propantheline but comparative data are not available. In a series of 25 patients treated for 30 days, side effects were experienced in 8 patients (32%) and therapy was discontinued in 3 of them (2—nausea and 1—sore throat with dry mouth). Hock (5) reports that in doses of 10 mg. daily, 8 of 44 patients (18.2%), and in doses of 15-20 mg. daily, 21 of 26 patients (80.8%), experienced side effects. Visual complaints were manifested at doses of 20 mg. daily. In 11 of 346 patient trials (3.2%), side effects were severe enough to warrant discontinuance of the drug (3). Overall, the most frequent side effects experienced were dry mouth, nausea, slowing of urinary stream, blurred vision, tachycardia, palpitations and heartburn. Ages of the subjects were not listed. The exact frequency in this overall analysis is not clear.

In studies done by the manufacturer, no effect on the metabolism of phenobarbital, diphenylhydantoin, warfarin, phenylbutazone or tolbutamide could be demonstrated.

(Continued on Page 11)

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†A neurogenic bladder is a term used to describe abnormalities in the urinary bladder resulting from deficiencies in neurological control. UNB is a neurogenic bladder resulting from a net loss in voluntary control. RNB is a neurogenic bladder resulting from a total loss of sensory and motor communications with voluntary centers.

*Dr. Hoopes is Assistant Professor, Division of Clinical Pharmacy and Department of Family Medicine, University of Maryland.

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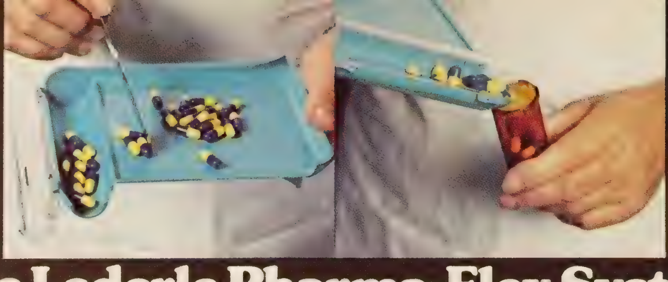

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Drug Evaluation *(Continued from Page 8)*

LONG TERM SAFETY:

The manufacturer has long term safety data on 128 subjects over periods of 7 days to 8 months. No abnormal organ function or enzyme activity was attributable to the drug in these studies. No long term safety data is presented specifically for children.

DISCUSSION:

In vitro studies indicate that oxybutynin has activity against spasms induced by stimuli other than cholinergic agents (morphine and barium chloride). Analgesic and anesthetic actions of the drug have also been documented in animals. These properties are distinctly different from other anticholinergics. The above activities of oxybutynin may account for the clinical differences demonstrated for the drug. However, these specific effects have not been demonstrated in humans.

Uninhibited neurogenic bladder is a result of a net loss of inhibitory influences on the bladder. Sensory impulses remain intact. Lesions exist either in the spinal cord or in the upper motor neurons (the brain) and result from a wide variety of etiologies. The patient senses a full bladder only just as it reaches capacity. Capacity is reduced and spasms are induced causing symptoms of frequency, urgency, urge incontinence and pain. The voiding contractions are re-enforced by parasympathetic stimulation. Anticholinergics are therefore indicated to control symptoms. Oxybutynin (5 mg. t.i.d.) is useful in the symptomatic control of this problem.

Reflex neurogenic bladder results from functional or structural transection of neural tracts above the sacral segments. The result is a loss of all sensory and motor communications with the voluntary centers. Urination occurs involuntarily. In many patients with UNB and in nearly all patients with RNB, there is associated dysfunction of the external sphincter (somatic motor innervation). Since anticholinergic agents have action only on bladder (detrusor) musculature, these agents play only an adjunctive role in the management of such patients.

Frequency, urgency, incontinence, dysuria, and nocturia are associated with many types of bladder problems. UNB and RNB are only two of many possible causes of these symptoms and are diagnosed only through cystometry. Patients presenting with these symptoms need adequate investigation into the etiology. It is the etiology which defines the treatment, not the symptom.

Finally, the claim that oxybutynin compared in equipotent doses with propantheline has less frequent side effects is not well documented. From the data available it is this reviewer's opinion that at equipotent doses side effects occur with equal frequency but the severity may be less with oxybutynin.

Data are available regarding acute and chronic overdose in humans although anticholinergic effects would be expected to predominate. The Maryland Poison Information Center should be consulted in such situations.

(Continued on Page 29)

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The Colonial and Revolutionary Heritage of Pharmacy in America

by David L. Cowen*

The Colonial Practice of Pharmacy – Part I

The traditional services of the pharmacist — the procurement, preservation, preparation, compounding and dispensing of drugs and medicines — were practiced, in whole or in part, by four different functionaries in the American colonial period. They were the physician, the apothecary, the druggist, and the merchant. Each in some way differed from the pharmacist that developed in the nineteenth century but each contributed to the evolution of the American pharmacist.

THE PHYSICIANS

As was noted in the previous selection, few trained practitioners of pharmacy were to be found in the early colonial period, and indeed throughout the entire colonial period. Medicine and pharmacy were not separated; the physician practiced pharmacy and the apothecary practiced medicine. It was in fact not easy to distinguish between the two; what they called themselves and whether they put their primary emphasis on medicine or pharmacy determined which was a physician and which an apothecary. Moreover, there was an easy fluidity from one calling to another that reflected the frontier conditions of the colonies and the professional freedom permissible under the British system. John Johnstone's rapid progress from "druggist" to "apothecary" to "doctor" was noted in the preceding selection.

The practice of pharmacy was part of the practice of all the physicians, the best trained and the virtually untrained. Zabdiel Boylston, one of Boston's foremost physicians, regularly advertised his drugs in the newspapers in the early 1720's. Where elsewhere physicians could have used the scarcity of competent apothecaries as an explanation for their pharmaceutical activity, that was not the case in Boston. A contemporary of Boylston pointed out that there were 14 apothecaries in the city and yet "all our Practitioners dispense their own medicines."

The first provincial medical society, the New Jersey Medical Society, promulgated a fee bill as one of its first activities in 1766. That bill allowed the physician no fee for visits in town; that is, his diagnosis and advice were free. His income was derived from surgery and from the medicines he dispensed. The first American price list for drugs is the 1766 fee bill of a medical society! (Prices varied from 1 shilling for a dose of anodyne pills to an expensive 7s6d. for a decoction containing one ounce of Peruvian bark.) A decade earlier the Charleston, South Carolina Faculty of Physic had rejected the New Jersey scheme — they felt there should be payment for each of their functions.

The New Jersey fee bill makes it abundantly clear that is was not pre-packaged medicines that the physician handled. The list included virtually every dosage form: boluses, decoctions, electuaries, draughts, elixirs, powders, pills, ointments, tinctures.

Some physicians, and probably apothecaries who called themselves physicians, operated "doctor's shops." The famous Hugh Mercer, who left his medical practice in Fredericksburg to die, a patriot General, at the Battle of Princeton, ran such a shop. The 1762 newspaper advertisement that offered "a complete and valuable Shop of Medicines with Mortars and sundry Instruments and other Things, *very suitable for a Doctor*" illustrates how commonplace a physician's pharmaceutical practice must have been.

THE APOTHECARY

The British apothecary had his right to diagnose and prescribe, that is to practice medicine, legally recognized in the famous Rose case of 1703. In America the apothecaries arrogated unto themselves the same privileges, and certainly the same argument used by the British, namely, that there were not enough qualified medical practitioners to meet the needs of the public, was valid in America.

There is indication that the apothecary in America trained apprentices and that there were therefore some specialists in pharmaceutical techniques in the colonies. A Virginia statute of 1736 distinguished between the qualified physician and the apothecary who had "served an apprenticeship to the trade." (The distinction was made for fee purposes: the apothecary could charge only about half as much as the physician for the same services.) In 1766 Thomas Boulton was apprenticed to the Pennsylvania Hospital "to learn the art, trade and mystery of the apothecary."

Although there were apparently an increasing number of apothecaries as the colonies became more populated — witness the 14 in Boston in the 1720's — they are clouded in considerable confusion. Perhaps this is because many turned into physicians, as did Bartholomew Browne of Salem, Massachusetts, or, conversely, because men who started as merchants later considered themselves apothecaries, as Carl Heinitsch of Lancaster. But the names of a good many are known. Among them, Frederick Otto, who arrived in Lititz, Pennsylvania in 1760 where the local regulations granted him a monopoly. "No other persons shall in any sort meddle with Store or Shop-keeping or exercise the business of an Apothecary," ran the statute in that Moravian town. One of the most famous was Christopher Marshall, who started a pharma-

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*David L. Cowen is Professor of History at Rutgers, the State University of New Jersey.

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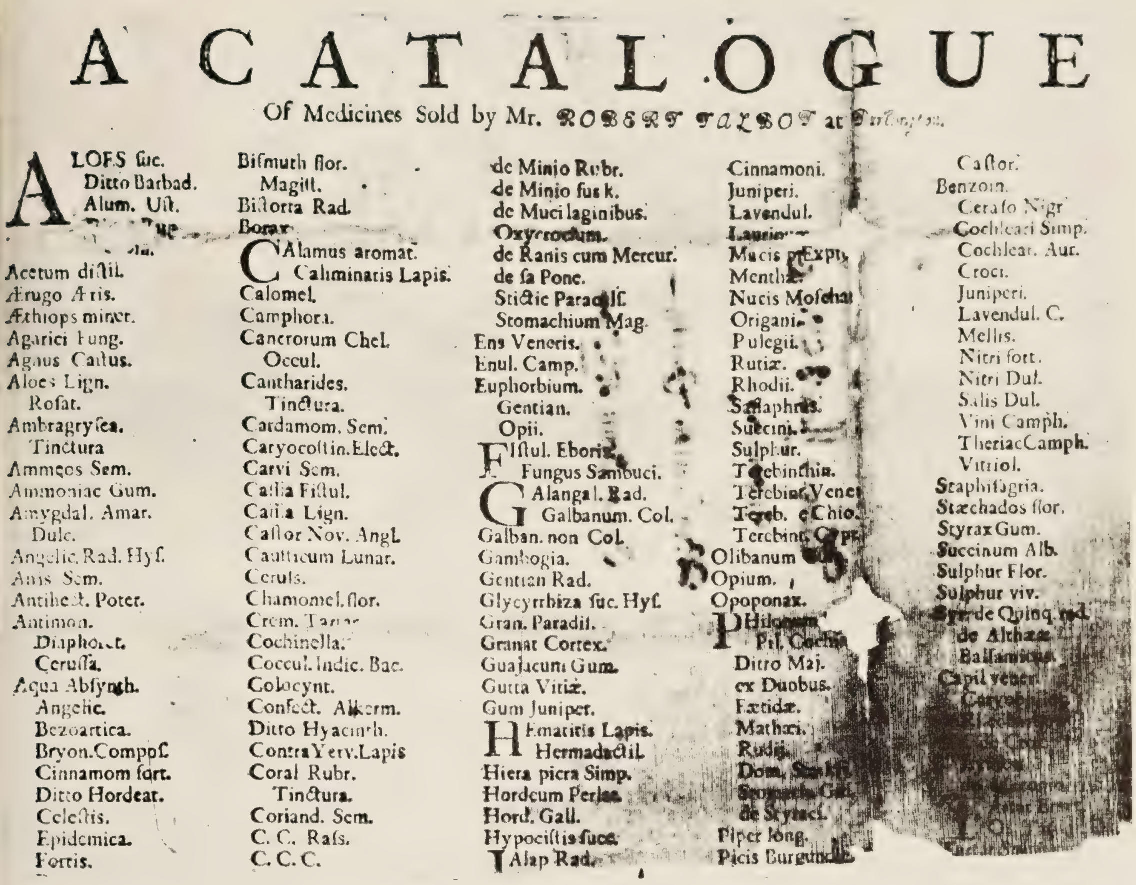

A CATALOGUE

Of Medicines Sold by Mr. ROBERT TALBOT at Burlington.

ALOES ſuc.
Ditto Barbad.
Alum. Uſt.
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Acetum diſtil.
Ærugo Æris.
Æthiops miner.
Agarici Fung.
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Aloes Lign.
Roſat.
Ambragryſea.
Tinctura
Ammeos Sem.
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Dulc.
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Cinnamom fort.
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Biſmuth flor.
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Carvi Sem.
Caſſia Fiſtul.
Caſſia Lign.
Caſtor Nov. Angl.
Cauſticum Lunar.
Ceruſs.
Chamomel. flor.
Crem. Tartar.
Cochinella.
Coccul. Indic. Bac.
Colocynt.
Confect. Alkerm.
Ditto Hyacinth.
Contra Yerv. Lapis
Coral Rubr.
Tinctura.
Coriand. Sem.
C. C. Raſs.
C. C. C.

de Minio Rubr.
de Minio fusk.
de Mucilaginibus.
Oxycroceum.
de Ranis cum Mercur.
de ſa Pone.
Stictic Paracelſ.
Stomachium Mag.
Ens Veneris.
Enul. Camp.
Euphorbium.
Gentian.
Opii.
FIſtul. Eboris.
Fungus Sambuci.
GAlangal. Rad.
Galbanum. Col.
Galban. non Col.
Gambogia.
Gentian Rad.
Glycyrrhiza ſuc. Hyſ.
Gran. Paradiſ.
Granat Cortex.
Guajacum Gum.
Gutta Vitiæ.
Gum Juniper.
HEmatitis Lapis.
Hermadactil.
Hiera picra Simp.
Hordeum Perlat.
Hord. Gall.
Hypociſtis ſucc.
JAlap Rad.

Cinnamoni.
Juniperi.
Lavendul.
[illegible]
Macis per Expr.
Menthæ.
Nucis Moſchat.
Origani.
Pulegii.
Rutiæ.
Rhodii.
Saſſaphras.
Succini.
Sulphur.
Terebinthin.
Terebint. Venet.
Tereb. e Chio.
Terebint. Cypr.
Olibanum.
Opium.
Opoponax.
PHilonium
Pil. Cochiæ
Ditto Maj.
ex Duobus.
Fœtidæ.
Mathæi.
Rudii.
Dom. [illegible]
[illegible]
de Styraci.
Piper long.
Picis Burgundiæ.

Caſtor.
Benzoin.
Ceraſo Nigr.
Cochleari Simp.
Cochlear. Aur.
Croci.
Juniperi.
Lavendul. C.
Mellis.
Nitri fort.
Nitri Dul.
Salis Dul.
Vini Camph.
Theriac Camph.
Vitriol.
Staphiſagria.
Stæchados flor.
Styrax Gum.
Succinum Alb.
Sulphur Flor.
Sulphur viv.
Syr. de Quinq. rad.
de Althææ.
Balſamicus.
Capil vener.
[illegible]

America's first separate publication of a pharmacist, Talbot's Catalogue ca. 1725

ceutical dynasty in Philadelphia that was to play an important role in American and pharmaceutical history.

The apothecary often played the role of wholesaler — a role to be assumed by the druggist — and there are records of apothecaries offering to sell "the best medicine at the most reasonable rate . . . to town and country physicians."

But the best account we have of the practice of the colonial apothecary, and his essentially pharmaceutical role, comes from the records of Robert Talbot, apothecary in Burlington, New Jersey. Talbot died in 1725 and just before (although possibly after his death there appeared "A Catalogue of Medicines Sold by Mr. Robert Talbot of Burlington," which is the first separate publication by a pharmacist in British North America. This, plus the detailed inventory of his estate taken on March 14, 1726/7, tell us a great deal about the apothecary's activity. In the first place, his medicines were essentially like the stock of any European apothecary; there were very few drugs of North American origin. Most of them were of vegetable origin, a few of animal origin. A few chemicals were included — sal ammoniac, tartar, epsom salts, vitriol — but many minerals and mineral compounds. His supplies of arsenic, antimony, calamine, flowers of sulphur, rock alum, bole Armenic and litharge were large. The last probably indicates that he made up the plasters that appeared on his inventory and it is likely as well that the elixirs and spirits on his list were also put up by him.

But perhaps most interesting was Talbot's equipment. Along with the usual mortars and pestles, scales, tiles and bottles of many sizes, Talbot had a "Chafin dish" of about 100 pounds, two small copper stills, 17 cedar drug tubs, 27 small crucibles, a four-pound infusion pot, two copper pans, one copper funnel, three glass funnels, and sundry "Receivers," "Upright Bodys," "Crook Necks," and "Blind Heads." Clearly Talbot's practice indicated that he was a rather large-scale practitioner of the art of the apothecary and that a great deal of that art required manipulation.

Part II will be published in a later issue.

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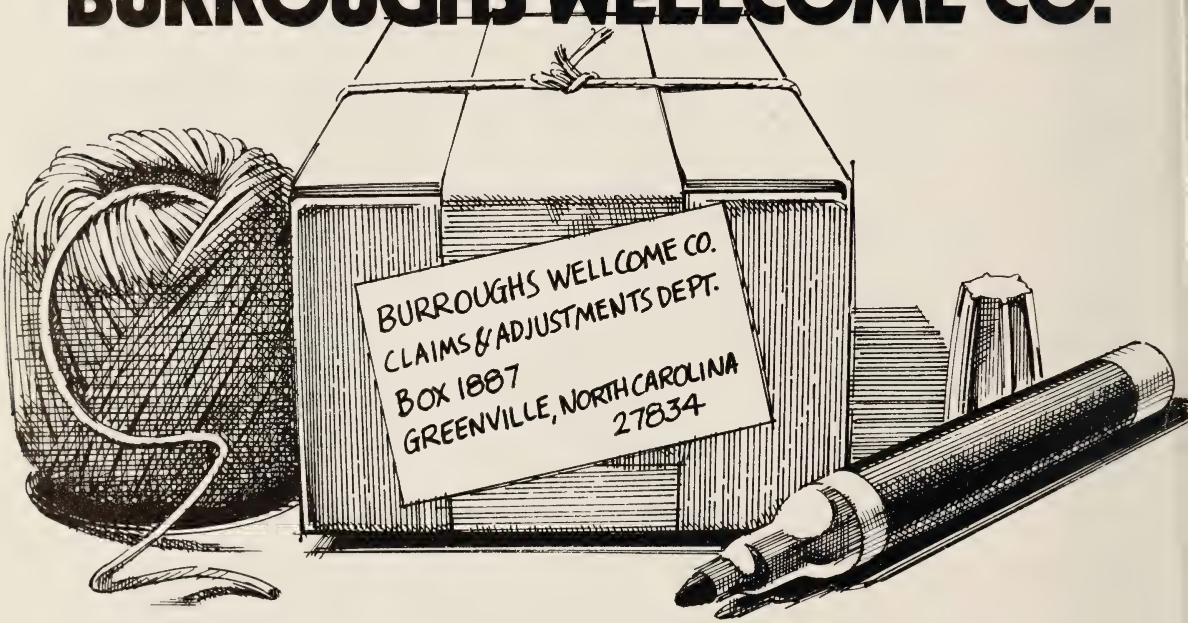

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by

Richard M. Schulz, R.Ph.

The change of season provides a backdrop in which the pharmacist is seen in his continuing role of health educator. Whether the malady be summer sunburn or seasonal sniffles, the patient approaches the pharmacist as the most accessible person in the health care field. Dr. Kenneth Kirk stated in the September issue of *The Maryland Pharmacist* that the pharmacist has the opportunity to interact with the patient in all five stages of illness. In fact, no other health professional can claim this position. This element of pharmacy practice supports the Millis Commission's recommendations to colleges of pharmacy to incorporate social sciences as a vital part of the students' curriculum. These opportunities could result in the genesis of a new pharmacist, molded by today's needs and tomorrow's projections. He or she is not entirely unique, but uniquely effective in answering the needs of the patient. The pharmacist, in effect, will be the communicative agent for the health care system.

Although our knowledge is primarily centered around the tablet or the teaspoon of medication, our emerging area of expertise must be in communication. The lawyer who is a master of the law yet deficient in its practice is in the same predicament. The fact that the pharmacist is in a favored position is merely wasted rhetoric unless he has the ability to engage in meaningful and informative dialogue on the appropriate level.

Certainly consultation about sunburn does not grant a position of prestige to the pharmacist. However there are situations that occur on a daily basis in which appropriate professional intervention is warranted and desperately needed:

- A nineteen-year-old male approaches the prescription counter to pick up a refill for his mother for methotrexate. He asks what the medication is for. What do you say? Do you give him an answer that possibly his parents do not want him to know? Do you ignore him or cursorily dismiss the query?
- A fourteen-year-old girl nervously approaches your young female pharmacy aide and asks for a contraceptive vaginal suppository and a douche. You overhear the conversation and must decide whether to sell contraceptives to patrons of that age. If you decide "yes", then should you intervene and tell her about the various over-the-counter contraceptive measures that are relatively more effective?
- A personal friend for many years has suffered the tragedy of losing a son or daughter in an automobile accident. The parent was given a minor tranquilizer to be taken when needed for nerves and depression. Your refill record shows that the dosing frequency has increased to a dangerous level. What do you say? Do you remain silent and wait for the "traumatic" period to pass?

There is a much deeper issue than is readily apparent in these examples. Obviously there is no right or wrong answer. One's decision to actively intervene is directly affected by the circumstances of that particular situation. The central issue here is not the pharmacist's factual knowledge about methotrexate or contraceptive suppositories. We must focus not only on *what* the pharmacist says, but *how* he says it. The ability to communicate is a skill that can be learned and improved. It serves no purpose for the pharmacist to counsel a patient if the message is directed to an anonymous creature on the other side of the counter.

The list of variables making each person unique is seemingly endless. An evaluation of present psychological and emotional make-up, educational level, stage of illness, and sociological background should help determine the manner in which you communicate your message. For some people, a diuretic's action should be described as an "increase in urination". For others, being told they will "make more water than usual" is appropriate because it is the level they can most easily understand. A hospital pharmacist practicing in an anti-coagulant clinic must judge the patient's ability to comprehend the terminology before explaining the do's and don't's of self-medication.

It is well documented that much of the communication between physician and patient is not understood or retained by the patient. We are also aware that the patient responds favorably to a pharmacist who shows the interest and concern to fill this information void. Because of the pharmacist's unusual position in being easily accessible and his vantage of observing all stages of illness, and his acceptance as a health professional, he can become liaison between physician and patient as well as serving as the provider of pharmacy services. As an agent for communication, the pharmacist, through appropriate intervention, ensures a more personalized quality of health care.

**Mr. Schulz is a practicing community pharmacist and Assistant to the Executive Director of The Maryland Pharmaceutical Association.*

ACKNOWLEDGEMENT

Credit is due Paramount Photo Service for all of the photo coverage of events in the July issue and of the MPhA Convention published in the August issue.

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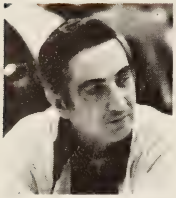
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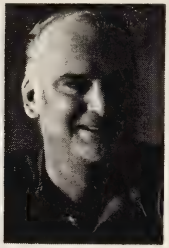
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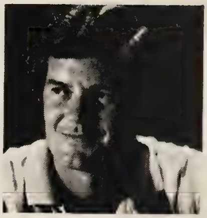
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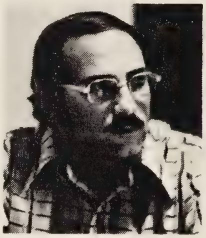
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Each unit will consist of a booklet containing a concise, clear discussion of the topic. At the end of each booklet there are 30 multiple choice questions drawn directly from the discussion material. Complete the answer sheet and submit it to the School for grading. All discussions and tests have been pre-evaluated for content and clarity. When you have completed all six assignments, you will receive a certificate and Continuing Education credit for relicensure (1.2 CEU/12 hours) as needed.

While the course is primarily self study, discussion sessions will be held at the School of Pharmacy in Baltimore and also will be arranged on a special rotating site basis on the Eastern Shore by Dr. Tom Sisca. Applicants who wish to attend the Eastern Shore sessions are advised to contact Dr. Sisca at the Easton Memorial Hospital, Easton, Maryland, (301) 822-1000.

The Baltimore sessions will be held on Tuesday and Wednesday evenings 7:00 p.m. to 9:00 p.m., Room 201, Allied Health Professions Building, School of Pharmacy.

Date of the Baltimore Sessions:

November 16 & 17, 1976
December 14 & 15, 1976
January 18 & 19, 1977
February 15 & 16, 1977
March 15 & 16, 1977
April 19 & 20, 1977

Registration Fee: Attending Discussion Session — $35.00
Self-Study Only — $30.00

Resource individuals will be available for consultation at the School of Pharmacy at selected times.

Text: "Applied Therapeutics for Clinical Pharmacists" may be used for correlated study.

#276 APPLIED THERAPEUTICS FOR PHARMACISTS

A repeat of last years course (omitting contraceptives) consisting of six (6) topics:

1. Parkinsonism
2. Angina
3. Peptic Ulcer Disease
4. Poisonings
5. Urinary Tract Infections
6. Congestive Heart Failure

This course will be self study only, no discussion sessions. Study guides and questions will be mailed together at four week intervals. Self study tests have been revised based on last year's experience.

Resourse individuals will be available for consultation at the School of Pharmacy at selected times.

Text: "Applied Therapeutics for Clinical Pharmacists"

Registration Fee: $55.00 including text
$35.00 without text

#476 THE USE OF AUXILIARY LABELING SYSTEMS FOR PROVIDING PATIENT INFORMATION

To be presented in cooperation with the Maryland Pharmaceutical Association and local pharmaceutical groups.

Prompted by increasing concerns demonstrated by noncompliance of patients with prescription regimen, patient errors in medication use, drug reactions and interactions, and the resulting escalation of human suffering and costs, a special committee at the School of Pharmacy was charged to deal with this subject. The committee, under the direction of Dr. Ralph Shangraw and Mr. Donald Fedder, has developed procedures which will hopefully create interaction of the pharmacists with the patient to provide proper patient care. This program will be presented at seven locations throughout the state in conjunction with meetings of local pharmaceutical associations as follows between January 1 and April 1, 1977.

1. Allegheny-Garrett County Pharmaceutical Association
2. Baltimore Metropolitan Pharmaceutical Association
3. Eastern Shore Pharmaceutical Society
4. Anne Arundel County Pharmaceutical Association
5. Prince Georges-Montgomery County Pharmaceutical Association
6. Washington County Pharmaceutical Association
7. Upper Bay Pharmaceutical Association

Dates and sites of the meeting will be announced.

Registration Fee: There will be no charge for this special program.

Handouts: Informative handouts will be distributed at the meetings.

Continuing Education credits will be granted for these programs.

The meetings will be presented by members of the School of Pharmacy faculty and local pharmacists using systems.

(Continued on Page 29)

You filled 4 million Butazolidin® alka prescriptions last year.

Important Note This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema

“...unquestioned efficacy in inflammatory arthritis...”

urs in patients over sixty, discontinue drug
cautions The following should be accomplished at
ılar intervals: Careful detailed history for disease being
ted and detection of earliest signs of adverse reactions,
ıplete physical examination including check of pa-
t s weight, complete weekly (especially for the aging) or
every two week blood check, pertinent laboratory
dies Caution patients about participating in activity
uiring alertness and coordination, as driving a car, etc
es of leukemia have been reported in patients with a
ory of short- and long-term therapy The majority of
se patients were over forty Remember that arthritic-
pains can be the presenting symptom of leukemia
erse Reactions This is a potent drug, its misuse can
to serious results Review detailed information before
nning therapy Ulcerative esophagitis, acute and re-
vated gastric and duodenal ulcer with perforation and
norrhage, ulceration and perforation of large bowel,
ult G I bleeding with anemia, gastritis, epigastric pain,
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abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia anemia due to blood loss including occult G I bleeding thrombocytopenia pancytopenia leukemia, leukopenia bone marrow depression sodium and chloride retention water retention and edema plasma dilution, respiratory alkalosis metabolic acidosis fatal and nonfatal hepatitis (cholestasis may or may not be prominent) petechiae purpura without thrombocytopenia toxic pruritus, erythema nodosum erythema multiforme Stevens-Johnson syndrome, Lyell s syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria hematuria oliguria, anuria renal failure with azotemia glomerulonephritis, acute tubular necrosis nephrotic syndrome, bilateral renal cortical necrosis renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug impaired renal function cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision retinal hemorrhage toxic amblyopia retinal detachment hearing loss, hyperglycemia thyroid hyperplasia toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established) agitation confusional states, lethargy, CNS reactions associated with overdosage including convulsions euphoria psychosis depression headaches, hallucinations, giddiness vertigo coma hyperventilation insomnia, ulcerative stomatitis salivary gland enlargement
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Flu Immunization Campaign BMPA Meeting Feature

Photo Paramount Photo Service

DR. MARK GOLDBERGER

Dr. Mark Goldberger, Deputy Chief, Division of Communicable Diseases and Epidemic Intelligence Officer for the Maryland State Department of Health and Mental Hygiene, was the featured speaker at the September 28 meeting of the Baltimore Metropolitan Pharmaceutical Association. Ronald Lubman, President of BMPA, presided at the meeting held at the Quality Inn in Pikesville at 8:30 P.M.

Dr. Goldberger reviewed the history of flu epidemics and explained the various kinds of strains which presented problems in immunization. The presentation which included informative slides on the epidemiology of influenza virus provided a comprehensive understanding of immunization for pharmacists.

At the business meeting which followed, the agenda included reports of the President, Executive Director Nathan Gruz, as well as the following reports: Public Relations, Charles Spigelmire; Small Business Advisory Committee, Milton C. Sappe; status of Medicaid MAC, MPhA President Melvin Rubin, who also reported on the MPhA Industrial Relations Committee; Paul Freiman spoke of the work of the MPhA Consumer Affairs Committee.

There was considerable discussion of problems involving the use of multi-scripts and payment from HMO's for pharmacy service. The meeting was adjourned at 11:00 P.M.

November Designated Diabetes Detection Month

The American Diabetes Association has designated November as Diabetes Detection Month. The Maryland Affiliate of the national group will, on request from various organizations or companies, handle diabetes detection sessions for that particular group. Literature is also available on request. Correspondence should be sent to:

American Diabetes Association
Maryland Affiliate, Inc.
3701 Old Court Road
Executive Park, Suite 19
Baltimore, Maryland 21208

Anne Arundel County Pharmaceutical Association

The Anne Arundel County Pharmaceutical Association held its first fall dinner meeting on September 30 at the Empire Towers in Glen Burnie. After a cocktail hour and dinner, and with members of the executive board of the Anne Arundel County Medical Society in attendance, an informative lecture and discussion on the topic of drug bioavailability was conducted by Dr. William Crouthamel, Ph.D., Associate Professor of Pharmacy at the University of Maryland School of Pharmacy. Following a lively question and answer period, a short business meeting was held with Vice President Vince Regimenti presiding.

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calendar MP

December 2 (Thursday) — MSHP, Good Samaritan Hospital, 7 P.M.

1977

January 15–22 — MPhA trip to Acapulco

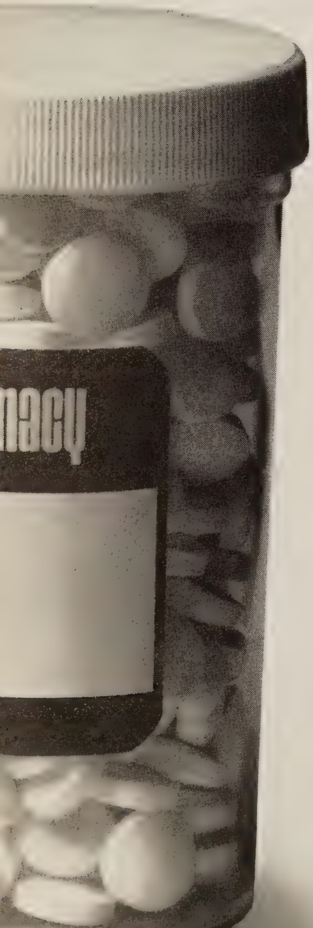
February 13 (Sunday) — BMPA Annual Banquet and Dance, Bluecrest North

March 5–13 — MPhA skiing trip to Vail, Colorado

April 14 (Thursday) — MPhA Regional and House of Delegates Meeting

May 15–19 — APhA Convention, New York City

June 19–22 — MPhA Annual Convention, Carousel Hotel, Ocean City, Maryland



noncompliance:

a "complication" that too often accompanies hypertension

Perhaps because he usually does not feel any symptoms of the disease, the hypertensive patient is particularly likely not to take his medication as prescribed.

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To help, Merck Sharp & Dohme would like to supply you with a quantity of lay booklets, developed in cooperation with the American Pharmaceutical Association. They are available from MSD Professional Representatives, or by writing Professional Service Department, Merck Sharp & Dohme, West Point, Pa. 19486.

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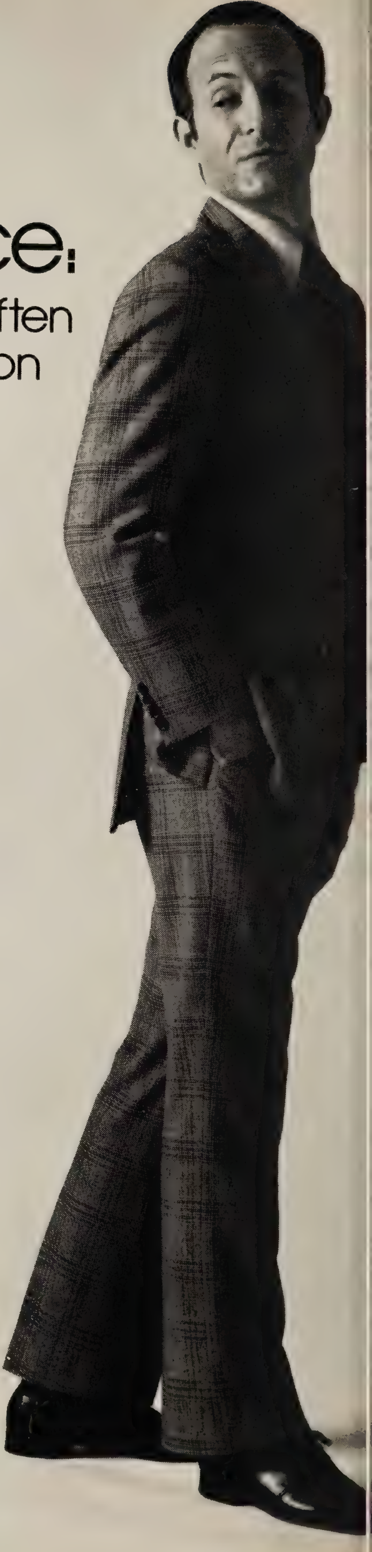

COMPUTERIZED PATIENT PROFILE RECORDS SYSTEM AT GILPIN

The Scrip Stat — Computerized Rx Company of Grand Island, Nebraska, has been acquired by the Henry B. Gilpin Company. Scrip Stat, a patient profile records system company, has customers in 24 states and Canada. Its merger will add another source of support to the Retailer Services Department of the Gilpin Wholesale Drug Company. William A. Burke, R.Ph., formerly President of Scrip Stat, will assume the position of General Manager for this new Gilpin program.

Harrison Leach, Vice President, Retailer Services said, "Scrip Stat brings to our Gilpin customers the best patient profile system on the market today. While simply typing the Rx label, our customers will have their patient receipt, a daily log, a patient record label, a prescription copy, and a computer input copy. All of this is done in a very short period of time — saving the pharmacist time and increasing his profits." In addition, Scrip Stat offers the services of the computer at a very low cost to pharmacists. It handles Third party Administered Payments (TAP), eliminating the extra forms, and gives professional management tools for Pharmacy Accounting Control (PAC).

This program is already operational in Nebraska with many customers. Scrip Stat will start in Gilpin's Washington and Baltimore divisions with installations in Norfolk and Indianapolis to follow rapidly as the computer programs for Third-party Acceptance are cleared.

Gilpin's new program will be presented to its pharmacist customers in phases to meet their needs on an individual basis:

DATAPAC I (Phase I) will be an efficient time-saving profile system only. It will offer the forms for store usage in either snap-out or continuous styles and the pharmacist may use his regular typewriter. The other two phases require the use of a pin feed typewriter, which will be supplied by Gilpin, to assure proper registration for optical scanning.

DATAPAC II (Phase II) will enable users of the basic Scrip Stat Profile System to submit their Third-party Claim through Gilpin's computer. This will eliminate the writing of extra forms and assure faster payment. Gilpin will format these to the exact needs of the Third-party and submit computer tape to the payee. Payment will be made directly to the pharmacist.

Through **DATAPAC III** (Phase III), users of the basic Scrip Stat Profile System will submit all prescriptions to Gilpin. These programs, in addition to the Third-party services, will give them a full accounting program of their prescription department on a biweekly basis. A complete record of past year and current month record of sales of the individual product, and several other valuable management tools will be produced for the pharmacy.

Gilpin suggests that all pharmacies enter the program in phases, beginning with Phase I. They can purchase any phase, but because of the simplicity, Gilpin will be able to offer the total DATAPAC III at one-half the cost of on-line computer programs.

Scrip Stat is another addition to the many retailer and computer services already offered by Gilpin, namely, DATAREX; Micro-Info; RediMed; CARE/SPARTAN Chain Buying; Cooperative Advertising and Promotional Programs; TIP TOP, in-store accounts receivable programs; and Store Planning and Remodeling Services. "It meets the needs of our pharmacy customers to have the tools and ability to compete in today's market!" stated James E. Allen, Jr., Gilpin Executive V.P. "We intend to continue to offer the best services and tools for the independent pharmacist. Scrip Stat Profile System has been developed by a pharmacist, and is being used in over 100 pharmacies today. When merged with Gilpin's extensive systems capability it will work to save the pharmacist time and money and to give him the tools necessary for better professional service to his patients."

The Henry B. Gilpin Company, with headquarters in the nation's capital now operates seven full service wholesale drug houses, located in Atlanta, Georgia; Baltimore, Maryland; Dover, Delaware; Indianapolis, Indiana; Memphis, Tennessee; Norfolk, Virginia and Washington, D.C. . . . in addition to its surgical supply and service merchandising subsidiaries in Virginia, Maryland and Indiana.

School of Pharmacy Faculty Changes

The University of Maryland School of Pharmacy has announced faculty appointments and promotions for the academic year.

Joining the faculty are:

Gordon A. Ireland — Appointed instructor in clinical pharmacy in conjunction with the Veterans Administration Hospital. He received his B.S. in Pharmacy in 1973 from the University of Maryland and his Pharm. D. degree from the University of Minnesota in 1976.

Thomas C. Majerus — Appointed instructor in the Division of Clinical Pharmacy in conjunction with the Inpatient Medical Services of the University of Maryland Hospital. Dr. Majerus received his Pharm. D. degree from the University of Minnesota in 1976.

Bruce Duplisse — Holding a Ph.D. in pharmacology from the University of Arizona, Dr. Duplisse will teach physiology and pharmacology as an assistant professor in the Department of Pharmacology and Toxicology.

M. Antoinette Schiesler — Appointed instructor in pharmaceutical education and director of minority programs. Ms. Schiesler holds an M.S. degree in science education from the University of Tennessee and is currently a Ph.D. candidate on the College Park campus of the University of Maryland.

School of Pharmacy faculty promotions include:

Robert J. Michocki to assistant professor of clinical pharmacy in the Division of Clinical Pharmacy.

John M. Hoopes to assistant professor of clinical pharmacy in the Division of Clinical Pharmacy in conjunction with the Family Practice Division of the University of Maryland Hospital.

Michael D. Loberg to associate professor of medicinal chemistry in the Department of Medicinal Chemistry in conjunction with the University's Division of Nuclear Medicine.

William G. Crouthamel to associate professor in the Department of Pharmacy.

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OPEN FORUM

Don't Be A Dope — Don't Be Duped!

There are three possible reasons for pharmacists dispensing medication on altered, forged or uttered prescriptions — avarice and the "I don't give a damn" attitude are the two types that the various Boards of Pharmacy and Drug Control Inspectors can best treat.

This article concerns the pharmacist who wants to do the correct thing but who comes upon a prescription that looks good, but is uncertain regarding its validity. Naturally, I am talking about the Bureau of Narcotics and Dangerous Drugs, schedules II, III, IV, and, in some cases, schedule V drugs.

I would like to suggest the following proposals to insure a minimum of illegal prescriptions being filled: First and foremost is rule one: If you do not know either the physician's signature and/or the patient, do not — I repeat — do not fill the prescription without first checking into its validity. The reasons are simple and are answered by questions to yourself and the presenter: Why was the prescription brought to your pharmacy? Is the physician nearby? Does the patient live nearby? Is the drug an abused item? Is the quantity unusual? Is the spelling of the drug correct? Are the abbreviations in the directions correct? Is the presenter the patient? A friend? A relative? If the answers to the above questions are not to your liking or if, for some reason, you are suspicious, check further.

I have found that most of the illegal prescriptions I have encountered have come from hospitals. If I do not know the patient when presented with a potentially dangerous, illegal, or habit forming drug, I make it a practice to call the hospital. Doctors' Information or paging should be able to tell you if the physician whose name appears on the prescription is on the hospital staff. If he or she is a staff member, ask to speak directly to the physician prescribing the drug and explain the situation and circumstances in full. Believe me, they will appreciate it! If the physician is on the staff, fine — fill the prescription. If not, you have to decide the next step.

The other prescriptions that can be presented for dispensing that are illegal are either stolen or "lifted". Stolen blanks are obtained by stealing the physician's bag or breaking into his office. "Lifted" blanks are obtained by going to the physician's office, having him write a prescription for the patient who has "lifted" a number of blanks while the doctor is out of the examination room and who afterwards copies the original word-for-word. This "lifted" form of false prescription is on the rise and is the hardest kind of illegal prescription to catch because a legal script has been written, and if you call the physician's office you will get a "yes" answer.

I had two such "lifted" prescriptions presented within one week and I happened to know the physician's signature very well. In both cases I had to argue with the secretaries and in once instance angered the physician enough for him to come to my pharmacy to see the prescription. Much to his amazement he had to admit I was correct.

The name of the game here is perseverance. Rule three is to check regular prescriptions for possible fraud of schedule charges. Rule four is to watch the prescription presenter. If he or she is paying a lot of attention to what you are doing — beware. If he or she is waiting at the front of the pharmacy by the door — beware. If you are told by the presenter that they have to leave now but will come back for the script — beware.

If, while you are verifying the prescription, you are asked by the presenter what you are doing, tell them you have to verify an item on the prescription and proceed to do just that.

Telephoned prescriptions for schedules III, IV, and V are legal but that does not necessarily mean that the "verifying" call you get is. If you do get a call from a "physician" and the prescription meets the criteria of doubt, call the physician back using the Yellow Pages as your source of information. This is rule five.

Now that you have the rules to protect yourself from filling illegal prescriptions you have the option of taking a number of legal actions. From the least drastic to the most, they are as follows:

1. Simply return the prescription to the presenter with little or no explanation.
2. Return the prescription to the presenter with little or no explanation after placing a big "X" mark on the prescription to alert the next pharmacist.
3. Do not return the prescription, telling the person that you have to verify it before returning it.
4. Do not return the prescription and inform the presenter that you have to notify the police.
5. Do not return the prescription or even talk to the presenter but call the police stating your name and location and inform them you have a "possible" illegal prescription.
6. Do not return the prescription or even talk to the presenter and after you have called the police (using some pretext), alert the other store personnel (as early in the episode as possible) to aid in watching the actions of the presenter and probable accomplices.
   If the police arrive in time to take the person into custody you can do your part by presenting your facts to the judge in court.

This article is not meant to be a cure-all, but I believe the onus for this type of drug problem is on the pharmacist — only he or she can lower the problem. No one else.

Phillip Paul Weiner, R. Ph.
Baltimore, Md.

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Nathan I. Gruz, Editor
Maryland Pharmacist
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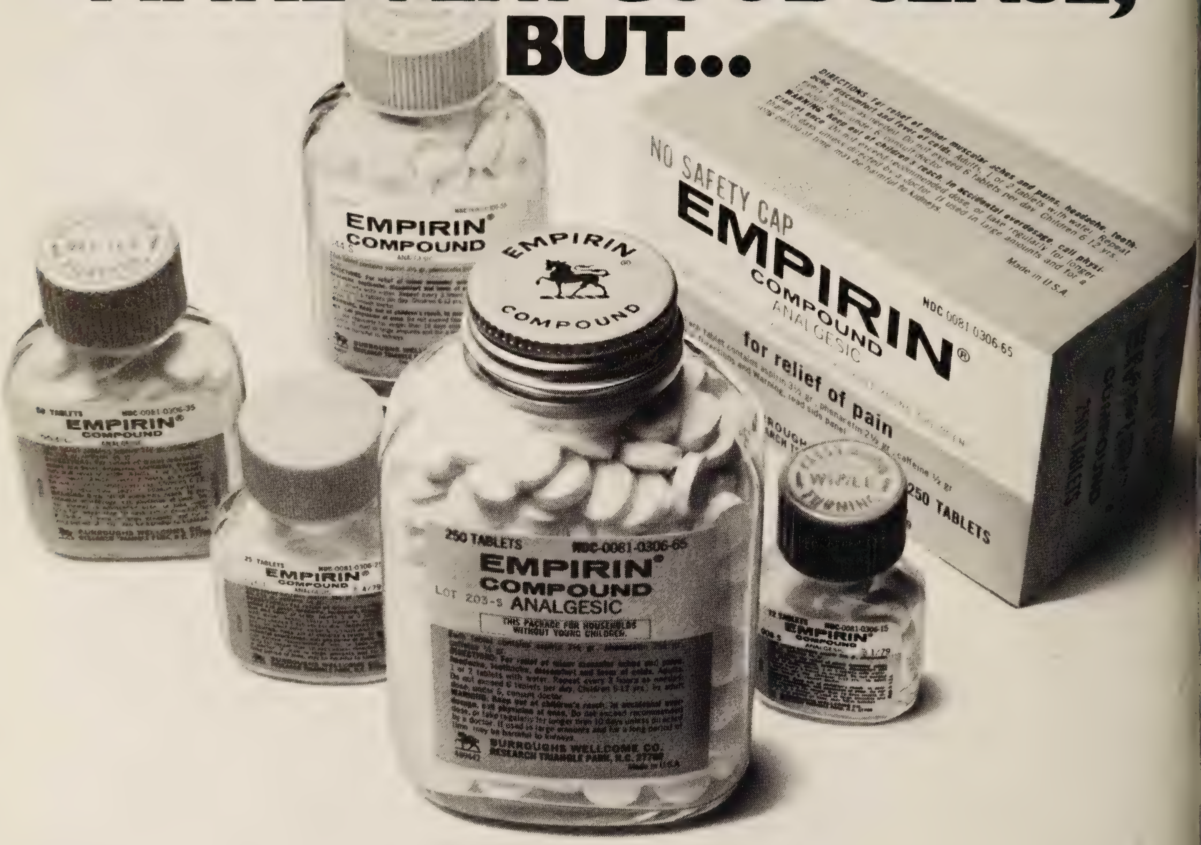
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Use Of Model Bioassays In Product Development

The use of bioassays to counter rising costs in the development of new topical dosage forms is reviewed in the October issue of the *Journal of Pharmaceutical Sciences*, published by the American Pharmaceutical Association.

Because of the average cost of more than $10 million to introduce a new drug entity, the pharmaceutical formulator cannot afford to submit suboptimal dosage forms to clinical investigation. Unnecessary reformulation and repetitive testing must be avoided.

To reduce this problem, model bioassays have been developed to screen various topical formulations prior to clinical trials. Pertinent bioassays for various pharmacological classes of topical agents are discussed and evaluated in this 20-page *J. Pharm. Sci.* review.

Antimicrobial bioassays have presented special problems because of the difficulties in cultivating a model experimental infection that can be consistently reproduced and that persists long enough to evaluate formulations for their relative efficacy. However, several bioassays that satisfy these requirements have been developed and are grouped under antibacterial formulations (occlusion test, expanded flora test, and persistence test), antifungal formulations (experimental Trichophyton mentagrophytes infections and in vitro assay in stratum corneum), and antiyeast formulations.

Of all bioassays used in the development of topical formulations, those used for topical corticosteroids are the most sophisticated and refined. The fibroblast assay, the thymus involution bioassay, and the alcoholic vasoconstriction bioassay have been developed for the evaluation of relative potencies of the active ingredient. Other bioassays have been developed to evaluate the relative potencies of finished formulations and to measure suppression of inflammation and formulation vasoconstriction. One main advantage of the bioassays of topical corticosteroids is their correlation with clinical trials.

Model bioassays are also discussed for antimitotics, sunscreens, antidandruff formulations, anesthetic-analgesics, antipruritics, antiwart formulations, and products for Rhus dermatitis and psoriasis.

CORRECTION

APS — THIRD PARTY Rx PLANS: The APS current pricing policy listed in the August issue of *The Maryland Pharmacist*, p. 21, should be corrected to read: AAC asked, will pay AWP if from wholesaler and if noted on form.

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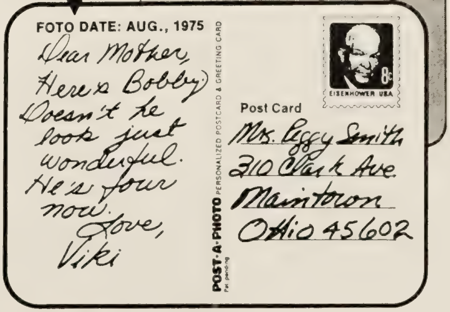

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Drug Evaluation *(Continued from Page 11)*

SUMMARY:

Oxybutynin chloride has been shown to be superior to propantheline in increasing bladder capacity and relieving symptoms of frequency, urgency, urge incontinence, and pain associated with UNB. It is a useful adjunct in the management of patients with UNB and RNB. Anticholinergic side effects in therapeutic doses of 5.0 mg. three times daily probably occur with equal frequency but with less severity than with other agents of this class.

Supplier:	Marion Laboratories, Inc.
Forms:	5 mg. tablets
Recommended Doses:	adults — 5 mg. 2-3 times daily (maximum 20 mg. daily); and children — 5 mg. twice daily (maximum 15 mg. daily).

References

1. Lish, P. M., Labudde, J. A., Peters, E. L. and Robbins, S. I. "Oxybutynin — A Musculotropic Antispasmodic Drug with Moderate Anticholinergic Action," Arch. Int. Pharmacodyn. *156:* 467-488, 1965.
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2. "Travelers Checks" not signed in your presence.
3. "Personal Checks" in payment for money orders.
4. Any check if it is not dated, post dated more than 30 days, or already endorsed.
5. A check with erasure marks, or any change in it.
6. Social Security cards, business cards, club cards, bank books, work permits, insurance cards, learners permits, letters, birth certificates, library cards, initialed jewelry, voters registration cards, etc. UNLESS it is presented with a current automobile operators license.
7. Any checks marked "hold" or "to hold". This indicates subject may just want a loan, rather than a check cashed.
8. A check written for a large amount from someone not well known to you, even though you have cashed several smaller checks for him before.
9. Check passers familiarity with other employees. This proves nothing with regard to the validity of the check.

Be Cautious Of . . .

1. A check drawn on a non-local bank.
2. A two-party check.
3. The subject cashing the check. Is he/she the right party?
4. Accepting only *one* piece of identification. Get two or more.
5. Accepting a check in which the name of the State does not agree with the location of the bank.
6. Checks where the company name is "typed" in. Most payroll checks are printed.
7. Those who tell you they have cashed checks in your place of business with other employees before.
8. Anyone who asks that an order be sent to a local address and then requests the difference in "cash" from the check.
9. Anyone who acts indignant when questioned about a check.

Do . . .

1. Know your endorser. Obtain positive identification of the passer so as to be able to identify same, if the check is worthless.
2. Establish a policy for cashing checks and instruct your employees to use it.
3. Past all "bad check" lists for all of your employees and customers to see.
4. Notify all employees when a bad check has been received.
5. REMEMBER . . . You do *not* have to accept any check. This is your prerogative. Exercise it.
6. Prosecute the writers of bad checks if it's obvious that their intentions were dishonest.
7. Keep your bank signature different from your correspondence signature.
8. Limit the authority to "approve" checks to a minimum of personnel.
9. Photograph everyone cashing checks.
10. Attempt to obtain one fingerprint on back of check.

Conclusion . . .

Approximately $1,500.00 are taken from businessmen every *minute* in the United States. This amount exceeds two million dollars per day! And, for every five billion checks passed annually, over ten million are forged. The bad check writer depends on apathy from businessmen in order to be successful. He needs this as one of his primary tools. DON'T GIVE IT TO HIM! Be concerned and see that your employees are.

Source: Baltimore County Police Department

---

obituaries

HENRY WICH

Henry Wich, 87, former Associate Professor of chemistry at the University of Maryland School of Pharmacy, died on August 14. Professor Wich was the last survivor of the School of Pharmacy Class of 1909. His father, Conrad Wich, founded a pharmacy at Lawrence and Stricker Streets, which was in existence for sixty years. Professor Wich is survived by his daughter, Mrs. Lucille W. Thornton, his son, Dr. J. Carlton Wich, his brother, Carlton Wich, and six grandchildren. His son and brother are also pharmacists.

ROSS CAMPBELL

Ross Campbell, a volunteer news correspondent for *The Maryland Pharmacist* for many years, died on September 26 at Union Memorial Hospital after a long illness. In addition to his work for this journal, he corresponded with several professional publications, sending them biographical information on their members. His journalistic work was his hobby and was of great assistance to The Maryland Pharmaceutical Association which will greatly miss his dedication and devotion over the years.

He was a retired Baltimore Gas & Electric Company employee, but began his hobby long before retirement.

Mr. Campbell is survived by several cousins.

DANIEL E. SMITH

Daniel E. Smith, owner of Smith Drug Center in Catonsville, died on Sunday, October 24 following a short illness.

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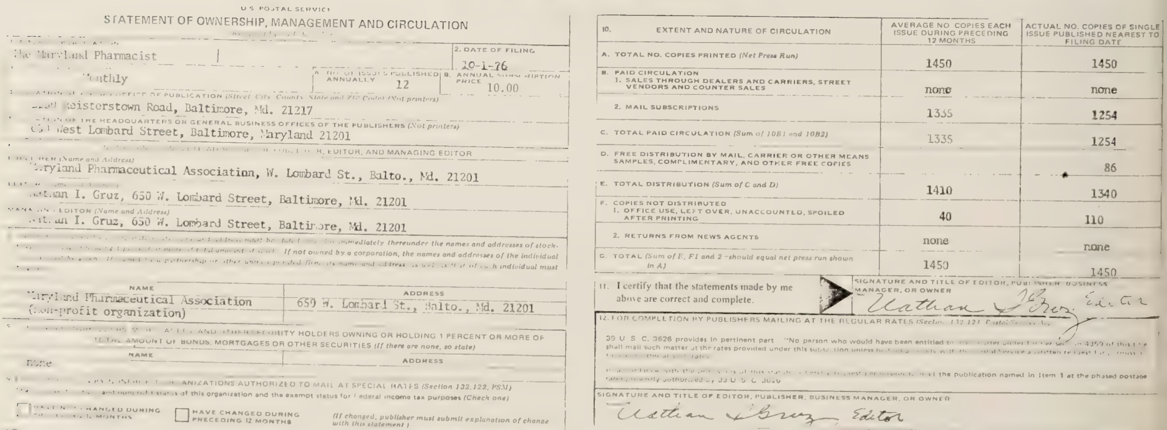

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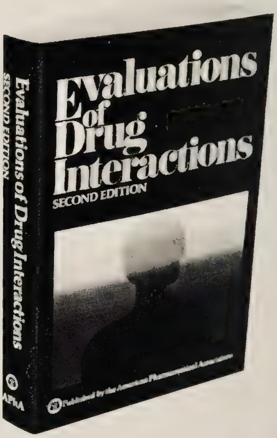
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NOVEMBER, 1976
VOL 52
NO 11

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An Editorial

Proceedings of the Fall Regional and House of Delegates Meeting

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Important Note This drug is not a simple analgesic Do not administer casually Carefully evaluate patients before starting treatment and keep them under close supervision Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently Warn patients not to exceed recommended dosage Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy Dosage should be taken with meals or a full glass of milk Substitute alka capsules for tablets if dyspeptic symptoms occur Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema A one-week trial period is adequate Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction, hypertension, thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers Drug may appear in cord blood and breast milk Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation Unexplained bleeding involving CNS, adrenals, and G I tract has occurred The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents Carefully observe patients taking these agents Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid) Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination Swelling of ankles or face in patients under sixty may be prevented by reducing dosage If edema

"...unquestioned efficacy in inflammatory arthritis..."

occurs in patients over sixty, discontinue drug
Precautions The following should be accomplished at regular intervals Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc Cases of leukemia have been reported in patients with a history of short- and long-term therapy The majority of these patients were over forty Remember that arthritic-type pains can be the presenting symptom of leukemia
Adverse Reactions: This is a potent drug, its misuse can lead to serious results Review detailed information before beginning therapy Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G I bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G I bleeding, thrombocytopenia pancytopenia leukemia leukopenia bone marrow depression sodium and chloride retention, water retention and edema, plasma dilution respiratory alkalosis metabolic acidosis fatal and nonfatal hepatitis (cholestasis may or may not be prominent) petechiae purpura without thrombocytopenia toxic pruritus, erythema nodosum erythema multiforme Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis nephrotic syndrome, bilateral renal cortical necrosis renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function cardiac decompensation, hypertension pericarditis diffuse interstitial myocarditis with muscle necrosis perivascular granulomata aggravation of temporal arteritis in patients with polymyalgia rheumatica optic neuritis, blurred vision retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia thyroid hyperplasia toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation confusional states, lethargy CNS reactions associated with overdosage including convulsions euphoria, psychosis depression headaches hallucinations giddiness vertigo coma hyperventilation, insomnia, ulcerative stomatitis salivary gland enlargement
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MESSAGES — THEN AND NOW:

1961 and 1976

November 1976 marks the completion of fifteen years as the Executive Director of the Maryland and Baltimore Metropolitan Pharmaceutical Associations and Editor of *The Maryland Pharmacist*. It is an appropriate time to look at some thoughts expressed in 1961 in the new editor's first editorial:

> ### PRACTICE OF PHARMACY UNDER ASSAULT
>
> There is no question that the practice of pharmacy as we have known it is under massive all-out assault. The atom-bombs of supermarket invasion of health and beauty needs traditionally in the realm of pharmacy has been progressing rapidly for some time. Then the hydrogen-bombs of mail-order prescription plans descended. Today we are subjected to the hundred megaton bombs of discount prescription operations.
>
> Now all the fruits of neglect of the basic facts of pharmaceutical life are being harvested.
>
> No one for sure can give all the answers. But as immediate first aid measures in these critical times in both the professional and economic life of pharmacy we must concern ourselves with what we can do alone as individuals and what we can do together as a group united against a common threat.
>
> Individually, each pharmacist must strive more than ever to enhance his **personal professional image** and the **professional image of his own pharmacy.** He must extend himself to give **personal** service to his clientele—to demonstrate that the community pharmacy is the ideal source for pharmaceutical services, health and beauty needs; and that the community pharmacist is the expert best qualified to counsel about drugs and vitamins.
>
> Collectively, we can join together in support of local, state and national pharmaceutical organizations that are working to properly represent pharmacists and to fight for the best interests of both the public health and the profession of pharmacy.
>
> Pharmacy has been losing its battles because its forces have been thin — emaciated by lack of 100% support — dragged down by free-loaders, who do not carry their share of the burden — weakened by those who wish to receive without being willing to contribute and to sacrifice for both their own and the common good.
>
> Now — or never — is the time for pharmacists to unite and to provide 100% membership to their associations and 100% support for funds established to work for their benefit. Only through the sacrifice of men willing to devote their time, energies and the necessary finances, will pharmacy have the resources to provide the organizational strength for sufficient funds and qualified personnel to plan, to work, to fight and win the battles for professional and economic survival.

—*The Maryland Pharmacist*, Vol 37, pg. 268, (November 1961)

In the same issue the following message was published:

> In this first message as your new Executive Secretary and Editor of *The Maryland Pharmacist*, I would like first to express my appreciation of the honor and privilege bestowed upon me. The Maryland Pharmaceutical Association has a long and honored place in the history of American pharmacy. These offices have been held by such incomparable giants as E. F. Kelly and Robert L. Swain, who starting from within our own precincts attained the pinnacles of recognition in the world of pharmacy. All my predecessors who have held these positions have left a legacy of high standards of accomplishment, which a newcomer can approach only with respect, humility and the resolve to emulate.
>
> Second, the membership is entitled to know the philosophy which will motivate their Executive Secretary. In brief, my approach to the profession of pharmacy and to the position which I am now honored to hold is:
>
>> Pharmacy is an honorable profession devoted primarily to making readily available the most effective medication for all humanity and thereby deserving an undisputed position as an integral member of the modern medical care team. The Maryland Pharmaceutical Association is the professional society of all pharmacists in the State of Maryland. Only through the voluntary banding together of all pharmacists, as well as those allied with the profession, can both the interests of public health and the requirements of a noble calling be welded together. Only through united organizational efforts can pharmacy secure its rightful position as a profession performing an indispensable service in an economy in which changes are occurring at a revolutionary rather than at an evolutionary pace.

As the executive officer of the Association, my resolve is to mobilize the resources of all segments of pharmacy — retail, wholesale, manufacturing, hospital, academic, law-enforcement, and any other — in order to advance the interests of pharmacy as a profession and to strengthen its economic foundations against increasing assaults.

In order to progress we must have new ideas, and I therefore openly invite you to participate, to make suggestions and constructive criticism for the mutual good of all.

The office of the Association will at all times strive to provide within its capabilities the services and assistance which the membership requires.

At this time the practice of pharmacy in the United States as a profession is in the most critical stage of its history. Its future — its fate — is being decided right now by the nature of our actions, as individual pharmacists and by the quality of leadership our pharmaceutical organizations can provide.

If there are honest differences among us, they can surely be resolved in a spirit of mutual goodwill. The ties of common self interest that unite all of us in the world of pharmacy far out-weigh the minor, sometimes trivial differences, which sometimes have become magnified out of proportion and have given comfort to the enemies of pharmacy.

I look forward to working together with all of you in a spirit of cooperation, understanding and goodwill.

There have been many changes during the interval since I assumed office, but this outlook still represents my philosophy and convictions. That is at least one satisfaction that can be derived in contemplating the never ending and constantly proliferating problems facing one involved in pharmaceutical association management.

To cope with the constantly accelerating pace of change and to be prepared at all times for "future shock," one must look at these developments not as "problems," but as challenges.

So in looking ahead, the ideas expressed fifteen years ago are still a foundation — a bedrock of personal commitment. With the participation of constructively motivated colleagues, we can expect to move step by step to the fulfillment of realistic goals. Let us all be thankful for the contributions of those members who work to advance the profession by service to their professional societies with devotion, intelligence, farsightedness and loyalty.

For one laborer in the vineyard, this is also an opportunity to give deeply felt thanks for experiencing what is truly meaningful and worthwhile in life. So appreciation goes out to those who have and do make a difference in the lives they touch upon: fellow members who are perceptive, straightforward, unselfish and supportive; loyal, dedicated staff; professional colleagues in and out of pharmacy, both here and through the nation, who always gladly respond when called upon; and above all the understanding, patience and love of one's wife, family and friends.

As the season of good will permeates the land, let true and lasting peace prevail at home and abroad; and let the serenity of inner peace enable us to proceed with our appointed tasks for significant personal fulfillment through compassionate service to others.

— *Nathan I. Gruz*

Membership Committee Plans Active Campaign

The MPhA Membership Committee, chaired by Elwin Alpern, met on October 26 to develop a plan for increasing the membership of MPhA and affiliated local organizations. Stemming from this meeting, the following action items are to be undertaken:

1) Conduct a general mailing to non-members listing the benefits of membership, recent actions of MPhA, and an opportunity for non-members to list areas of disgruntlement with the association.
2) In conjunction with Prince Georges-Montgomery County Pharmaceutical Meeting of November 23, MPhA is to field questions from the invited audience of member and non-member pharmacists from that local society.
3) Undertake a massive membership campaign utilizing local organization contacts. Plans are to have non-members of each area invited to local meetings with MPhA officers present who will cite advantages of membership and will answer questions from those gathered.
4) Enlist the assistance of recognized "leaders" in past graduating classes to spread the benefits of membership to pharmacy classmates.
5) Conduct an incentive program granting rebates to affiliated local associations for new members brought into the organization.
6) Coordinate the membership drive with APhA efforts.

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calendar MP

January 15–22 — MPhA Seminar and Tour — Acapulco

February 13 (Sunday) — Baltimore Metropolitan Pharmaceutical Association Annual Banquet and Dance, Bluecrest North

March 5–13 — MPhA trip to Vail, Colorado.

March 17 (Thursday) — MPhA Swain Seminar

March 28 (Sunday) — NARD National Legislative and Public Affairs Conference, Washington, D.C.

April 21 (Thursday) — MPhA Spring Regional and House of Delegates Meeting, Friendship International Hotel.

May 15–19 — APhA Convention, New York City

June 17–19 — MSHP Annual Convention — Sheraton Hotel, Ocean City, Maryland

June 19–22 — MPhA Annual Convention — Carousel Hotel, Ocean City, Maryland

Maryland Pharmaceutical Association
FALL REGIONAL & HOUSE OF DELEGATES MEETING
October 14, 1976 — Ramada Inn, Beltway

The Fall Regional Meeting was called to order by President Melvin N. Rubin at 9:15 A.M.

The President called upon affiliated and recognized organizations for a report or message. The following responded: Baltimore Metropolitan Pharmaceutical Association – Ronald Lubman, President; Prince Georges-Mongomery County Pharmaceutical Association – Paul Reznek, Secretary; Eastern Shore Pharmaceutical Society – Samuel Morris, Secretary; Anne Arundel County Pharmaceutical Association – Vincent Regimenti, Vice President; Maryland Society of Hospital Pharmacists – Mary Connelly, past President; George Stevenson, Chairman of the MPhA Industrial Relations Committee on behalf of the industry representatives in attendance.

PRESIDENT'S REPORT

The following report was distributed to the delegates.

The first part of my term in office has been spent to a large degree in organization of the year's activities. I want to thank the committee chairmen who jumped right in and went to work. George Stevenson and Vic Morgenroth started early in the summer, and others from whom you will hear today have begun their year's programs. I especially want to call attention to the effort given by Marv Friedman and others on Medicaid problems, which seem to increase in complexity and quantity as the programs grow.

Despite divided sentiments, I feel that the Association's course in handling the MAC/EAC problem was somewhere between the right way to go and the only way to go. We have every reason to believe that we will achieve as much or more parity without having to resort to a court of law than if we had. I realize that many members felt that this was the place to draw the line and fight Medicaid — win or lose; but I am glad that many finally decided that we should temper our feelings with reason.

I feel that Dick Parker's Legislative Committee has come up with a program that not only guides us on a good professional course, but takes advantage of all the resources at our disposal. We should be much more effective in Annapolis with fewer disruptions to the rest of the Association business by working with the other pharmacy groups in the state as well as consumer groups to attain our objectives. To this end, the Consumer Affairs Committee chaired by Paul Freiman will be a great asset in helping meet our legislative goals.

I am glad that I was able to attend functions of the Eastern Shore, Allegany-Garrett, Baltimore Metropolitan and Anne Arundel Pharmaceutical Associations and look forward to visits to the other groups at least once during the year. The responses and hospitality have been very warm.

I want to thank the office staff for the efforts they have given to the volume of minutes, notes, drafts and correspondence that I and the committee heads have thrust on them. From the point a few years ago when communications within the Association were held back due to work loads seemingly too large to handle, the staff has shown a willingness and ability to transmit information to members that would have seemed impossible.

Also of note is the fact that *The Maryland Pharmacist* is almost up to schedule and we will now be able to devote more attention to increasing the advertising revenue generated by the publication. The Association's finances have been aided in the past few years by successful trips run by Ron Lubman, but with changes in regulations for charter flights, we can expect to have less support from non-members and hope to make up the difference from the *The Maryland Pharmacist* as well as added membership.

In keeping with my desire to have as much time as possible at the regional devoted to business at hand and to give as many members as possible the chance to speak, I will restrict my formal remarks to items which have come up since this report was written.

President Rubin delivered the following President's message at the meeting.

I welcome you to the MPhA Fall Regional and House of Delegates Meeting, with a special greeting to the drug manufacturer representatives who are here today.

The interest shown as a result of the work of the Industrial Relations Committee is evidence that the manufacturers recognize the need to improve relations with pharmacists. I hope they will see by the programs we are working on that our interests are providing the public with the professional services for which we are trained and which the public has a right to expect.

Our legislative program will include continued work promoting the pharmacist's ability to select a brand of drug once the physician has chosen the drug entity. I do not expect my comments will be taken too critically because it appears that major manufacturers now realize they must provide the patient with less expensive products once the patent rights on a drug product have expired. Some of the largest companies are promoting and distributing generics or branded generics, and they are using generic houses to supply many of the products at lower costs.

While we work for product selection we hope that manufacturers will keep in mind that the way to join the tide of the future is to show us clearly that they produce quality products at appropriate prices. This means making available all bioavailability, proof of efficacy, and other data for us to examine. This also means they should not hold onto every dollar of profit a drug can make once research expenses have been met.

Work with us and APhA to take the mystique out of drug prescribing. Realize that the patient needs a break and, frankly, so do we. Sufficient funds for payment of drugs under third party programs must be left over to provide pharmacies a fair profit. Our presence is necessary for benefits to reach the patient.

Plain talk — no "campaign rhetoric" — is what our Industrial Relations Committee will have to work with. There *is* enough common ground and we hope to explore all of it in due time. Initial committee projects are perhaps less controversial, primarily establishing work relationships.

I am disturbed by a handful of pharmacists who remind me of the pharmacy owners of 25 years ago — unable to see the future because their profits blind them. I emphasize that only a few owners are still this parochial. How viable and profitable pharmacy will become depends on us today. We must continue our education; we must offer patient profiles and all the services that they open for the patient; we must work for the right to dispense quality medication the patient can afford; we must work for more avenues for the pharmacist to use his training. Those few who do not want to work in these directions because they see no immediate dollar signs will be talked about in 10 or 20 years as those responsible for the end of the independent pharmacy. "Count and pour" doesn't cut it anymore — anyone can do that.

MPhA spends a lot of time working for the owner — and we should. But the emphasis must be on the pharmacist, wherever he works. Otherwise the non-pharmacist owners will exercise too much control. Certainly we want equitable reimbursement from third parties. Certainly we must keep a place for the independent pharmacy. Without ownership as an alternate to being employed by others, all pharmacists will be in the same situation as nurses — highly trained, highly respected, yet underpaid. But the only effective way to progress is by striving to identify and maintain proper standards and areas of practice. Either we make more visible our qualifications and abilities to give proper health care, or we will not be able to stop the erosion of those looking for price alone to non-pharmacy oriented outlets, or to HMO's for those seeking the level of care we should be providing.

I feel it is necessary to continue to press for mandatory continuing education so all pharmacists will perpetually remain qualified to provide needed services. I am tired of hearing from doctors and legislators, "It would be OK if all pharmacists were as interested and knowledgeable as you . . . ." Most of you fall in that category, and I can assure the rest that even those of us who were C students in school learn from continuing education lectures without trying very hard — when the courses are relative to our functions.

However, I personally disagree with existing policy to work for mandatory profiles. There is no dispute that every pharmacy should keep them. All excuses are lame. But again, drawing from my own experiences, the pharmacist must have the interest and desire to *utilize* profiles. After a couple of years of appropriate continuing education, he or she will.

President Rubin then reported the recommendation of the Board of Trustees for the approval of Nathan I. Gruz as interim Executive Director.

President Rubin called upon Executive Director Nathan Gruz for his report.

EXECUTIVE DIRECTOR'S REPORT

The period since the last House of Delegates meeting at the Convention in June has been a particularly full one for the officers, the Board, the Association and very much for the entire staff. My staff — Carol Yarsky, Joan Hurlock, Mary Ann Frank and Richard Schulz — deserves much credit for extending themselves in producing a tremendous amount of printed material. The reports and volume of paper distributed during the past 3 months and at this meeting attest to that.

I think it is imperative that the Board of Trustees and all delegates pause and assess the situation.

- What are the Association's objectives? Are they realistic?
- What are the Association's priorities? Do they meet pharmacy's and the public's interests?
- What are the strategies that must be developed to achieve these objectives and priorities?

In light of present resources both financially and in staff personnel, what can we realistically conclude about these three critical factors?

The Regional Meetings and committee activities have been established to achieve certain goals. What are these goals? Has MPhA created a situation of "means" overpowering its "ends" — are "means" killing "ends"? Can we operate effectively when, before digesting and adequately implementing the results of an Annual Convention, we must prepare for a Regional "Mini-Convention." (I have heard our president in a slip of the tongue repeatedly refer to this Regional as "Convention.")

Organizations much larger than MPhA, like the state Medical Society with a staff many times the size of MPhA, conduct their business at their Annual House of Delegates Meetings with resolutions being submitted not less than 60 days prior to the meeting. At their semi-annual meeting, there is a limited agenda, primarily continuing education.

Aren't our members primarily interested in issues: continuing education, professional and economic status and advancement, establishment of Standards of Practice, participation in health planning, rather than organizational matters? The best attended programs in pharmacy are those that help the pharmacist be more effective in his professional responsibilities which enable him to grow as a pharmacist and as a person.

Now as to issues:

- Third party Rx programs (both government and non-government) with the associated problems of HMO's, health centers, group practice and national health insurance provisions pertaining to pharmacy — these must be of primary concern.
- The role of the employed pharmacist and his legitimate aspirations for professional and economic security are of critical importance.
- The initiatives of legislators and consumer groups in regulation of health professions will continue to be a challenge to pharmacists and their professional societies.

MPhA's immediate imperative must be expansion of the membership base and its resulting revenue generation to represent pharmacy more effectively and to fund the priorities agreed upon so that appropriate strategies can be implemented. The Membership and Finance Committees have already begun to look at some new approaches. Success will depend upon a broad participation in their programs.

Together with PHARMPAC — MPhA's political action arm — preparations must be accelerated for the forthcoming legislative session. The Tripartite Committee and the Board of Pharmacy must accelerate the development of guidelines and regulations. Necessary funding of the Board must be received. This won't be easy, we know.

The local associations will need more active attention from MPhA in order to involve more pharmacists and thus enable these pharmacists to contribute to the development of policy and guidelines.

We must demonstrate concern and sensitivity for tradition by assuring appropriate commemoration of milestones in our Association history. MPhA is 94 years old and we must begin now to plan our centennial. The Kelly Memorial Building, completed in 1952, will mark the 25th anniversary of its dedication in January 1978.

As to internal association problems, men and women of good will, with realistic, balanced perspectives can overcome many of the obstacles besetting us within our organization. I wish to thank all those who have worked in a constructive manner to further pharmacy, MPhA and me personally to work and fight for pharmacy.

Now, if I may, a short personal note. I have devoted almost half my adult life to MPhA, first as an assistant and then as Executive Director for the past 15 years. I have been dedicated to the preservation of pharmacy as a free, independent profession; to enhancing its status; to raising its standards of practice and its esteem in the public mind; I have fought as its advocate before any and all individuals, officials, agencies or organizations. *And I aim to continue this dedication in the service of MPhA and of pharmacy as long as I am given the opportunity.*

President Rubin then called upon Speaker of the House of Delegates Victor H. Morgenroth, who called the meeting of the House of Delegates to order at 9:45 A.M. He called upon the Secretary of the House Nathan Gruz who reported a quorum of delegates in attendance. The minutes of the previous meeting of the House of Delegates at the Annual Meeting, June 21–22, 1976, were approved upon the motion of S. Ben Friedman, duly seconded and passed.

REPORTS:

1. Treasurer Anthony G. Padussis presented the statement of cash receipts and disbursements through September 30. A motion for adoption was seconded and passed.
2. Membership Committee Report — Elwin Alpern, Chairman. A program for a membership campaign for the 1976 association year is being prepared. Plans are being made for a Membership Committee meeting to launch a drive. The agenda includes preparation of lists of non-members by graduation class date from the University of Maryland School of Pharmacy. An attempt will be made to assign solicitations of non-members by members of the same class if at all possible. We will seek at least two members from each class to make contacts of non-members where we can. The presidents and membership committee chairmen of local affiliates and MSHP will be invited.

   The paid up membership figures as of September 30 are 771 plus 151 SAPhA-MPhA members or 922 compared to 726 plus 76 or 802 last year same time. The total paid up membership for 1975 was 755 plus 80 students for a total of 835.

   The report was adopted.
3. Legislative Committee Report — Richard D. Parker, Chairman. The Legislative Committee met on August 4, 1976, to review the policies of MPhA concerning expected or desired legislation for the coming year. No major problems are currently on the scene, but we will be placing full emphasis on Drug Product Selection as a professional prerogative of the pharmacist. The consumer action group, MaryPirg is expected to be supportive of our position and we look to that group to lead the battle for us. Delegate Torrey Brown will most likely introduce a bill, but other support from the House of Delegates and the Senate is probable.

   The committee studied our position on Patient Medication Profiles and Continuing Education and reaffirmed the decision that regulation by the Board of Pharmacy should require these as Standards of Practice. We also endorsed the principle of a court test on the constitutionality of Mandatory Price Posting by supporting the request for declaratory judgement being sought through Legal Counsel, Joseph Kaufman. We favor the principle of disciplinary powers being defined so that the Board of Pharmacy may reprimand pharmacists for criminal acts outside the scope of Pharmacy laws. Member Paul Cuzmanes is working with the Tripartite Committee on a new draft of Pharmacy law which will correct several existing deficiencies. Paul hopes to have a draft available this fall for review. Members Michael Roberts and Paul Freiman are reviewing the APhA Policy Manual to present to the Spring Regional meeting a recommendation for MPhA policy position.

   The Legislative Committee asks the House of Delegates to voice support for the continuation of the above decisions and to present to it any recommendations for action.

   Mr. Parker moved for the adoption of the report with an amendment to indicate elimination of the approval of profiles as a mandatory regulation. Seconded and passed. Vincent Gattone, Eastern Shore delegate, recommended MPhA makes a standard profile card available for use by members.
4. Finance Committee Report — Stanley J. Yaffe, Chairman. Since the convention, the Finance Committee has held two meetings to review the financial condition of the Association, the income and expenditures of the current year, anticipated income for the next year and began work on the budget for 1977.

   One committee meeting was with the Association's Certified Public Accountant at which time it was recommended that changes be made in bookkeeping procedures and reporting and that a double entry system be installed, which will begin Jan. 1. The Committee is working on a program to

(Continued on Page 21)

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The Colonial and Revolutionary Heritage of Pharmacy in America

by David L. Cowen*

The Colonial Practice of Pharmacy – Part II

THE DRUGGIST

The term "druggist" was originally applied to the wholesaler of drugs and there is some indication that there were such dealers of drugs in Boston as early as 1690. The druggist needed no special medical or pharmaceutical background but it is interesting that the druggists either claimed such a background or soon assumed that they were competent to practice pharmacy.

Perhaps the most famous of the druggists were Drs. Daniel and Joshua Lathrop of Norwich, Connecticut. Both practiced medicine and Daniel was said to have learned the art and mystery of the apothecary in London. Their "huge gardens and greenhouses" for the growing of medicinal plants have already been mentioned in this series; in addition, the Lathrops were astonishingly large importers of drugs. It is no wonder that the Lathrop family were noted for their philanthropies.

In New Jersey the physicians John Griffith and Moses Scott continued to practice medicine and surgery when they opened a druggist's business in New Brunswick in 1774. Their accounts show that they did a flourishing business with their medical colleagues who did not seem to mind that members of the profession had gone into business. In Charleston, South Carolina, Joseph Chouler, "Apothecary, Druggist, etc." advertised huge quantities of drugs for sale in 1797.

But there were other druggists who made no claim to a medical or pharmaceutical qualification. In New York, Smith, Moore & Co., "At the Medical Pillar" advertised, in 1784, a "General Collection of Materia Medica, Botanical, Chemical, Galenical," and a full line of patent and proprietary medicines and physician's and apothecary's supplies. Their amusing advertisement, in verse, was directed to the medical practitioner whom they promised an "active scale and ample measure."

Finally there was Benedict Arnold, hero and villian of the American Revolution. Arnold, "a half-bred apothecary" — he had served a partial apprenticeship under the Lathrops — advertised himself as "Druggist, Bookseller, &c from London" in New Haven in 1761. But Arnold's concern with books and the wide variety of sundries he carried (see the illustration) suggest that despite the title "druggist" Arnold really ran a retail establishment. His biographer says that he was soon relishing being called "Dr. Arnold" by his clients.

The druggist did not restrict himself to medicines and medical supplies. The Smith, Moore & Co., advertisement, which was typical, also advertised confections, groceries, chemicals, leather, tin-foil, oilcloth and perfumes, among other sundries. Arnold's stock, besides prints and books, included painter's colors, a "few very neat watches," necklaces, earrings and buckles and buttons.

Druggists were occasionally prepared to fill prescriptions, but when they did so they were moving out of the wholesale business and into the practice of pharmacy.

THE MERCHANT

The merchant who dealt in drugs and made no pretension at having a medical or pharmaceutical training was frequently encountered throughout the colonial period and into the nineteenth century. (Indeed today's supermarket is a reversion to older times in this respect.) The merchant, or general storekeeper, handled crude drugs (like rhubarb, Jesuit's bark, jalap and opium), patent and proprietary medicines (like Francis' Female Elixir, Bateman's Cordial Elixir, Anderson's Pills and James' Fever Powder). They sometimes handled prepared medicines as well, like mercurial preparations, tartar emetic, extracts and essences. Their clientele was largely given to self-diagnosis and self-medication — professional services of the physician, even if available, were something of a last resort.

Like the druggist, the merchant who handled drugs carried a wide line of other merchandise. Indeed drugs were often only one part of the general store that also carried, as did the shop of Mary and Sarah Barnes of Trenton in 1781, for example, printed silks, gauze, China, thread, needles, orris, and brass carriage furniture. Other stores, more commonly, carried groceries, paints, dyes, ironmongery and dry goods.

Two famous Americans became storekeepers who dealt in drugs. One was Button Gwinnett of Georgia, the signer of the Declaration of Independence whose signature is now so rare. The other was none other than Benjamin Franklin. Franklin opened a store in Philadelphia where he offered a variety of commodities from "needles and pins to horses and slaves." His

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*David L. Cowen is Professor of History at Rutgers, the State University of New Jersey.

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AMERICAN REVOLUTION BICENTENNIAL
1776-1976

medicines included "Seneca rattlesnake root with directions how to use it in pleurisy." It is difficult to imagine a man of Franklin's personality not diagnosing and prescribing over the counter.

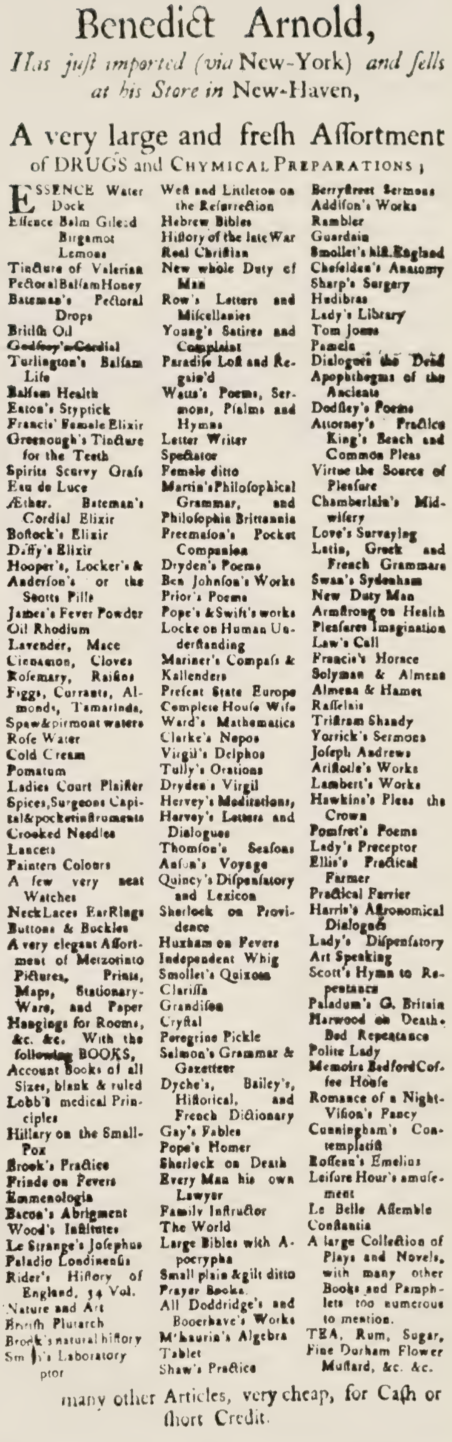
THE PHARMACIST

The lines of demarcation between the physician, the apothecary, the druggist and the merchant are not easily put down. They all practiced pharmacy, they all seemed to move freely from one category into another, and they all used whatever appellation suited their purposes. In addition to this group, however, there seem to have been some who considered themselves mainly what would today be called "pharmacists." They called themselves apothecaries, or, sometimes, chemists, and later, when the term lost its wholesale connotations, druggists, but they were involved mainly with the compounding and dispensing of medicines.

Some emerged from the wholesale druggists and for a while the "wholesale and retail druggist" was common (and accounts for the later popularity of the term "druggist" for what is now called the "pharmacist"). There are instances where merchants, whose stock-in-trade was largely medicinal, considered themselves practitioners of pharmacy. There were also physicians and apothecaries who virtually left the medical profession to concentrate on pharmacy. Often physicians and apothecaries sold their shops to apprentices as they moved into a purer medical practice. There were too, it must be added, those who without a suggestion of qualification, practiced pharmacy by instinct.

In any case there is ample evidence that in the eighteenth century there were what we would today think of as drugstores. In Boston William Rand "At the Sign of the Unicorn" (1733), in New York G. Duyckinck "At the sign of the Looking Glass and Druggist Pot" (1769), in Savannah G. Harral at his "New Medicine Store" (1797) were operating what were essentially drugstores. In Philadelphia Christopher Marshall established something of a pharmaceutical dynasty when he opened a shop in 1729.

Such drugstores also found it necessary to carry a wide line of merchandise, sometimes related to pharmacy, sometimes unrelated. The need for the pharmacist to augment his income by carrying non-medical items has a long tradition in the United States as well as elsewhere.



Benedict Arnold,
Has juſt imported (via New-York) *and ſells at his Store in* New-Haven,

A very large and freſh Aſſortment
of DRUGS and CHYMICAL PREPARATIONS;

ESSENCE Water Dock
Eſſence Balm Gilead
Birgamot
Lemons
Tincture of Valerian
PectoralBalſamHoney
Bateman's Pectoral Drops
Britiſh Oil
Godfrey's Cordial
Turlington's Balſam Life
Balſam Health
Eaton's Styptick
Francis' Female Elixir
Greenough's Tincture for the Teeth
Spirits Scurvy Graſs
Eau de Luce
Æther. Bateman's Cordial Elixir
Boſtock's Elixir
Daffy's Elixir
Hooper's, Locker's & Anderſon's or the Scotts Pills
James's Fever Powder
Oil Rhodium
Lavender, Mace
Cinnamon, Cloves
Roſemary, Raiſins
Figgs, Currants, Almonds, Tamarinds,
Spaw&pirmont waters
Roſe Water
Cold Cream
Pomatum
Ladies Court Plaiſter
Spices,Surgeons Capital&pocketinſtruments
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Real Chriſtian
New whole Duty of Man
Row's Letters and Miſcellanies
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Paradiſe Loſt and Regain'd
Watts's Poems, Sermons, Pſalms and Hymns
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Spectator
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Martin'sPhiloſophical Grammar, and Philoſophia Brittannia
Freemaſon's Pocket Companion
Dryden's Poems
Ben Johnſon's Works
Prior's Poems
Pope's &Swift's works
Locke on Human Underſtanding
Mariner's Compaſs & Kallenders
Preſent State Europe
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Clarke's Nepos
Virgil's Delphos
Tully's Orations
Dryden's Virgil
Hervey's Meditations,
Hervey's Letters and Dialogues
Thomſon's Seaſons
Anſon's Voyage
Quincy's Diſpenſatory and Lexicon
Sherlock on Providence
Huxham on Fevers
Independent Whig
Smollet's Quixote
Clariſſa
Grandiſon
Cryſtal
Peregrine Pickle
Salmon's Grammar & Gazetteer
Dyche's, Bailey's, Hiſtorical, and French Dictionary
Gay's Fables
Pope's Homer
Sherlock on Death
Every Man his own Lawyer
Family Inſtructor
The World
Large Bibles with Apocrypha
Small plain &gilt ditto
Prayer Books.
All Doddridge's and Booerhave's Works
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Hudibras
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Tom Jones
Pamela
Dialogues the Dead
Apophthegms of the Ancients
Dodſley's Poems
Attorney's Practice King's Bench and Common Pleas
Virtue the Source of Pleaſure
Chamberlain's Midwifery
Love's Surveying
Latin, Greek and French Grammars
Swan's Sydenham
New Duty Man
Armſtrong on Health
Pleaſures Imagination
Law's Call
Francis's Horace
Solyman & Almena
Almena & Hamet
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Triſtram Shandy
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Joſeph Andrews
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Pomfret's Poems
Lady's Preceptor
Ellis's Practical Farmer
Practical Farrier
Harris's Aſtronomical Dialogues
Lady's Diſpenſatory
Art Speaking
Scott's Hymn to Repentance
Paladum's G. Britain
Harwood on Death-Bed Repentance
Polite Lady
Memoirs BedfordCoffee Houſe
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A large Collection of Plays and Novels, with many other Books and Pamphlets too numerous to mention.
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Nitroglycerin Ointment Revisited

by Ralph Shangraw, Ph.D.* †

Since publication of the article on Nitroglycerin Ointment in the July, 1976 issue of *The Maryland Pharmacist,* a number of readers having personal experience with the product have contacted me and shared their ideas concerning some of the points made. It seems appropriate to share these experiences with all of the readers of *The Maryland Pharmacist.*

- Numerous complaints have been made about the piece of paper used as an applicator. These range from the fact that insufficient pieces of paper are supplied to the difficulty involved in using them. the stated inappropriateness of using one's fingers to spread the ointment has been questioned, using the argument that the amount of absorption which might occur through the fingers during application is insignificant and certainly not detrimental. This seems to be a valid line of thinking. Certainly patients should wash their hands after applying the ointment. However, it would still be advisable for persons who are administering the ointment to a patient to use the applicator paper. Other patients have noted that they have great difficulty in covering an eight inch diameter area with two inches of ointment.
- Comments made to me indicate that a wide variety of methods are used to occlude nitroglycerin ranging from light bandaging to the use of Saran® Wrap taped on four sides with Micro-Cel® tape. A resulting variation in percutaneous absorption and therapeutic response would be expected. Some patients apply the ointment to the lower leg and then use a high knee sock or stocking to hold the Saran® Wrap snugly around the ointment-encased leg. This would appear to give maximum occlusion. Switching from one leg to another would not cause any difference in absorption rate.
- A number of comments were made about switching of application sites. The original article did not preclude this practice but simply indicated that a change in absorption and effect might result. Some readers interpreted this to mean that it should not be done. According to the experiences of some users, rotation of sites is a necessity. It is not uncommon for a rash or irritation to result when the ointment is applied continually to the same site day after day. Patients who tightly occlude the application site also observe softening and maceration of tissues due to constant occlusion. In such instances the site should be rotated. As indicated previously, changing from one leg to another or one portion of the chest to another would probably give less variability than changing from leg to chest or vice-versa.

Nitroglycerin ointment remains a commonly employed method of achieving long acting nitroglycerin therapy. There seems no doubt that a more effective and aesthetic topical product could be prepared. It is unfortunate that the industry is so hesitant to invest research dollars in improving the dosage form of this drug of proven usefulness. It appears that in the case of nitroglycerin, FDA restrictions have resulted not in a "drug lag", but certainly a "dosage form lag".

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* The author wishes to express his appreciation to those readers who took the time to detail their experiences with this truly unique product.

† Professor and Chairman, Department of Pharmacy, University of Maryland School of Pharmacy.

New Rx Container Requirements

All pharmacists should begin immediately to obtain prescription container inventory which meets "tight" requirements, according to the American Pharmaceutical Association's Academy of Pharmacy Practice (APP).

The Academy's recommendation is intended to facilitate implementation of new United States Pharmacoepia-National Formulary (USP-NF) standards for moisture permeability for prescription drug containers which become effective April 1, 1977. APP's suggestion will permit a smooth transition to use of the new containers and help to avert a possible shortage of containers meeting "tight" standards which could result if suppliers were deluged with last-minute orders. The standards' effective date was originally January 1 of this year but was later delayed to give manufacturers a chance to build an inventory adequate for the anticipated high demand.

The standards came about as a result of testing by the National Formulary which showed that many drug containers being used at that time, and especially those with child-resistant features, were inadequate to provide proper protection against atmospheric moisture and gases.

Use of the new "tight" containers may require some additional patient education activity by the pharmacist, the Academy points out. In some cases safety closure operational features have been changed to ensure tightness, and many of the new containers are being manufactured from a different plastic material. Use of the newer material usually results in a container which is cloudy or even opaque in appearance, making it difficult or impossible for the patient to see the medication inside.

The Academy is currently surveying container manufacturers regarding the availability of "tight" containers so that pharmacists may be advised of alternate supply sources in the event a shortage develops.

Kinnard Speaker at Auburn

Dr. William J. Kinnard, Jr., Dean of the School of Pharmacy and President of the American Association of Colleges of Pharmacy, participated in the Annual Fall Seminar and the dedication of the new pharmacy building at Auburn University, November 12 and 13. Dean Kinnard spoke of the future of pharmacy and the vital role schools like Auburn must play in forming that future.

Paramount Photo Services

Fall Regional Meeting — Photo Coverage

Ramada Inn, Beltway — October 14, 1976

President Melvin N. Rubin addresses the delegates while Speaker of the House of Delegates Victor H. Morgenroth lends an attentive ear.

LAMPA MEETING: Paula Frank (second from left) of the Pikesville Home & Garden Center presented floral arrangement demonstration. Pictured with her (left to right) are Mrs. Rose Weiner, Membership Treasurer; Mrs. S. Ben (Bea) Friedman, President, and Mrs. Louis (Dora) Rockman, Treasurer.

SAPhA members (left to right) Donna Mallard, Cathie Schumaker, Joe Brooks, Frank Blatt, Bonnie Levin and Luisa Massari.

Luncheon Speaker Bertha Finney, Medical Services Specialist, Philadelphia Region, HEW.

Drug Manufacturer representatives with George A. Stevenson, Chairman of the Industrial Relations Committee (seated, far right).

Earl Kerpelman, President of the Board of Pharmacy and Parliamentarian of the House of Delegates.

Chairman of the Board Henry G. Seidman accepts the Past Presidents Award presented by John G. Bringenberg of E. R. Squibb.

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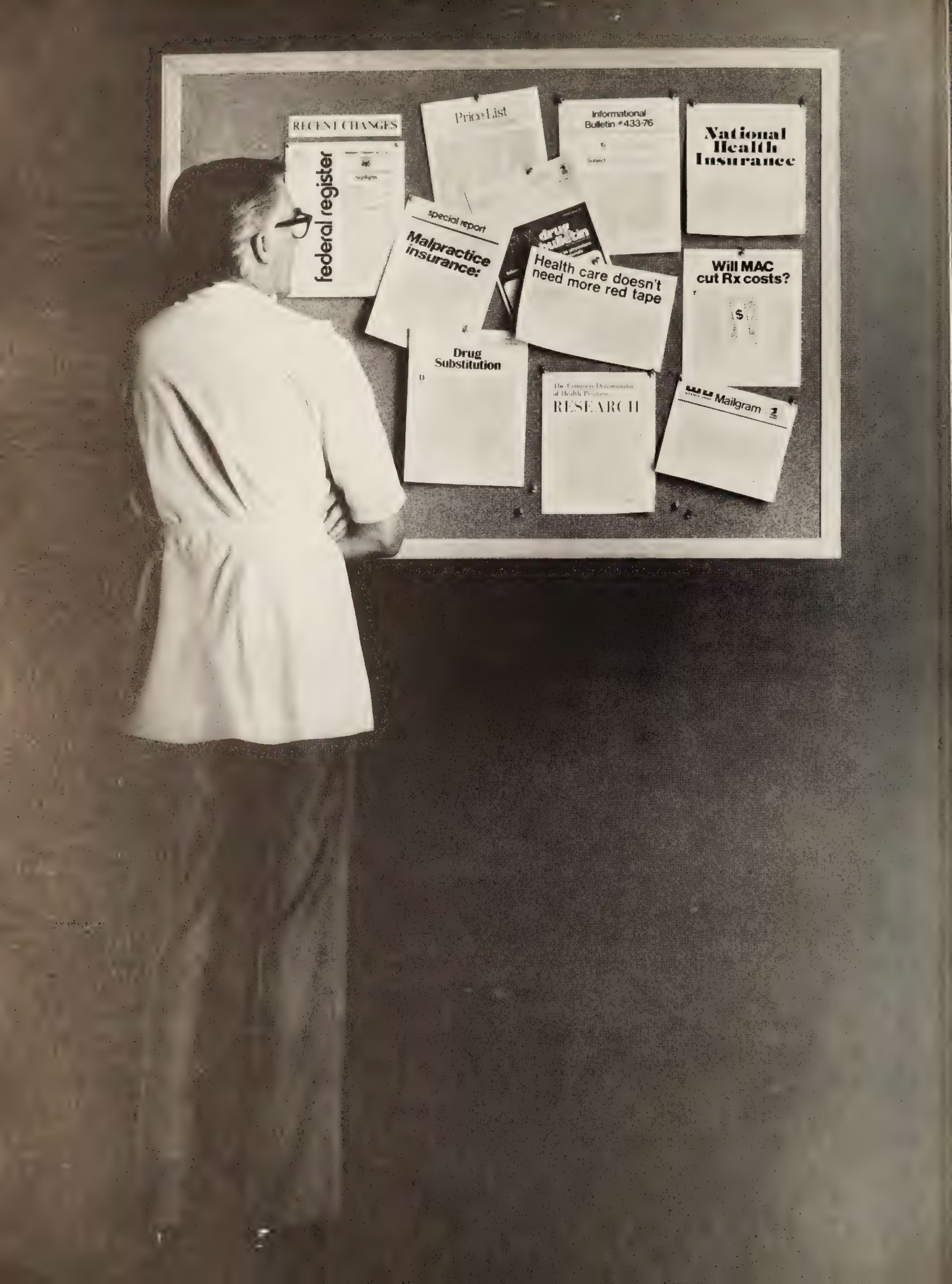
RECENT CHANGES
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highlights
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Informational Bulletin #433-76
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special report
Malpractice insurance:
drug bulletin
Health care doesn't need more red tape
Will MAC cut Rx costs?
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Drug Substitution
The Constructive Denominator of Health Progress
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND THE PATIENT.

Pharmacy today is in the spotlight, subjected to all kinds of scrutiny. Your actions are being monitored and judged, sometimes by unknown third parties.

The worry is that in the wake of this focus, your relationships with both doctors and patients will be weakened, without offsetting benefits. Consider three examples:

Drug substitution Until recently, state pharmacy laws, regulations, or professional custom have stipulated that non-generic prescriptions be filled with the precise products prescribed. But in the last five years, a number of these laws or regulations have been changed, permitting you, in varying degrees, to make the selection when a multi-source product is ordered.

These changes have been taking place against a background of growing evidence that purportedly-equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA has not enforced the same standards for hundreds of "follow-on" products that it has applied to original NDA approvals. This situation, it seems to us, is a compelling reason for product selection to rest on a sensible interchange between doctors and pharmacists—and not on legislative action.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant overall savings has been produced, nor is any likely, given the needs of pharmacy and the record of government in administering cost control programs.

MAC Maximum Allowable Cost, MAC for short, is a federal regulation intended to cut the government's drug bill by setting price ceilings for multi-source drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right, regardless of your economic or professional judgments. Pharmacists will have little to say about administration of the program, since government will have absolute authority to make its prices and fees stick. For other multi-source drugs on the MAC list, your reimbursement would be limited to a product price on a government "estimated acquisition cost" list and a state-established professional fee.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to patients: the cost of the research is more than ten times what it was, per product, in 1962, and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years or more now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present complex approval process contributes to needless delay of drug therapy. That's why the increased efficiency of the drug and device approval process is vital to all our futures.

We suggest you make your voice heard on these issues —among your colleagues and your representatives in state legislatures and in the U.S. Congress.

It could make a difference to patients and to the practice of your profession tomorrow.

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Quaint? Well, in the year 2052 A.D. how old-fashioned will today's pharmaceutical manufacturing facilities seem?

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A look at Abbott's past is a key to Abbott's present. When Dr. Abbott founded the Abbott Alkaloidal Company in 1888, he set innovative standards for his products. Early on, pharmacists and physicians learned to expect uncompromising quality in every pharmaceutical product that bore the Abbott name.

These standards are still inherent in every phase of every product made by Abbott Laboratories . . . now more than a half dozen divisions, nationwide, worldwide, with sales exceeding a billion dollars annually.

Chances are that in the fifties . . . the *twenty-fifties* . . . they'll be showing quaint, nostalgic photographs of what we see as today's sleek, computerized pharmaceutical manufacturing facilities. They'll seem hopelessly primitive to the pharmacists and the physicians of that future era. But traditions . . . Abbott traditions . . . being what they are, we're confident that those pharmacists and physicians can look to Abbott quality just as folks did in the good old days of the nineteen-seventies.

ABBOTT

ABBOTT LABORATORIES *North Chicago, IL60064*

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Fall Regional *(Continued from Page 10)*

expand sustaining membership and broaden support from suppliers.

Another meeting will be held before the end of the year to again review the financial status and complete the budget recommendations for next year.

Possible payment of APhA registration fees for MPhA delegates will be considered by the committee as well as a convention issue with solicitation of advertisement on a one-time-of-the-year basis. It was moved and seconded to adopt the report.

5. Industrial Relations Committee Report — George A. Stevenson, Chairman. Committee meetings were held on August 17, 1976 and September 28, 1976.

Projects:

A. The increasing of membership of pharmaceutical sales representatives in MPhA.

Goal: One associate member (full member, if pharmacist) from each company; if possible, at the District Manager level.

Actions:

- Committee members contacting their personal representatives — some interest being shown.
- Letter from Committee to pharmacy relations managers of approximately thirty companies inviting their Maryland District Manager to attend our Fall Regional Meeting on October 14, 1976 — some favorable responses received — more expected.
- Letter from Nathan Gruz, Executive Director to pharmacy-owner members of MPhA providing reasons for our campaign, application for membership forms and dues structure.
- Contacts made by George Stevenson with PMA and NPC Pharmacy Relations Committees key personnel asking for their help in our project.

B. Standardization of the placing of the NDC code, expiration date and lot number on labels and cartons.

- Committee recommendations have been referred to PMA and NPC Pharmacy Relations Committees for their help.
- Nathan Gruz, Executive Director, has forwarded the committee's recommendations to the FDA for their consideration.

Future projects to be considered by committee include: problem of outdated products and their possible pick-up by manufacturers for exchange or credit; review of distributional policies of pharmaceutical manufacturers; the making of package inserts more accessible; request to manufacturers to provide the PDR to pharmacists; problem of obtaining bioavailability information from some manufacturers.

MPhA members are requested to inform the committee of any project they would like to have considered.

NOTE: *The committee does not want any of its projects to interfere in any way with the MPhA's successful TAMPA operations* — our sphere of activity is with the pharmaceutical industry.

After the report was presented for consideration about twenty (20) representatives of industry who were present were introduced. The report was then adopted.

6. Consumer Affairs Committee Report — Paul Freiman, Chairman. The first meeting of this committee was held on September 27, 1976, at the home of the chairman. Present in addition to myself were Melvin Rubin, Nathan Gruz, Donald Fedder and Philip Weiner. In addition to the pharmacy members, Mr. John Ruth, Attorney General for consumer affairs for the State of Maryland, and Estelle Cohen, newly appointed public member of the Board of Pharmacy and an economist who teaches at the College of Notre Dame in Baltimore, were present.

A thorough discussion was held on the Generic Drug Bill, its implications, and the role of the consumer in passage of a more workable Drug Product Selection Bill. At the conclusion of this discussion, Mr. Ruth said that he will use his office in order to gather up the necessary information and consumer support, so that the chances of success in Annapolis will be increased this year for its passage. Also discussed was the law that requires that only a pharmacist in a pharmacy may discuss medication with a patient whether it be prescription or over-the-counter. At the suggestion of Mr. Ruth, the idea of the MPhA issuing signs for members to post in their pharmacies to advise the public of this law was accepted by the committee. Mrs. Cohen discussed the problems of the Board of Pharmacy and its financial bind. Her recognition of the need of more funding was apparent to the committee present and it was recognized that she should make a valuable contribution to its achieving of its purpose. A brief discussion was held on the posting law and on the merits of patient profiles and whether they should be mandatory. No agreement was reached on these two topics.

On October 5, 1976, I appeared on a panel discussion on the Drug Product Selection Bill. This seminar was sponsored by the MaryPirg organization, a Ralph Nader consumer group that is also interested in supporting this bill in Annapolis.

In conclusion, I would like to state that this first meeting, though poorly attended by the members proved to be successful in achieving its stated goal. The presence of John Ruth and Estelle Cohen not only added positively to the meeting, but also their interest in pharmacy as a profession that is really interested in the consumer was enhanced. The presence of John Ruth at an MPhA meeting in itself was, I feel, a major step in the achievement of pharmacy's goal to be recognized as a profession working in the public's interest. Mr. Ruth promised to contact me as soon as he had all the necessary information accumulated. At that time another meeting of this committee will be held which will lead hopefully to a more workable Drug Product Selection bill for Maryland, and a greater understanding by the public of the pharmacists role in serving the needs of the patient.

The report was adopted.

7. Professional Affairs Committee — Samuel Lichter, Chairman. The only charge thus far directed to the committee has

(Continued on Page 23)

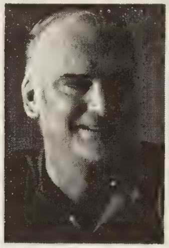
RAY HECKMAN

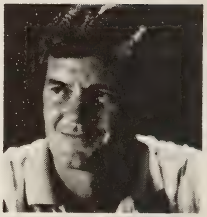
DENNIS CRAWFORD

DEAN SULLIVAN

BILL HYSSONG

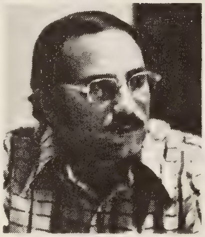
MIKE GERSHEN


JOHN O'MALLEY


GORDON KNIGHT

BOB GITTINGS

TOM DONOVAN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SK&F

Fall Regional *(Continued from Page 21)*

been the matter of the over-prescribing of Valium.® I have been in contact with Dr. Noel D. List, Chairman of Med-Chi's Maryland Drug Abuse and Alcoholism Control Committee (MDAACC). The first meeting of this committee's new year, in the latter part of October, will have this matter included on its agenda. Having been a member of this committee (MDAACC), I can assure MPhA that some useful dialogue will be developed.

As Chairman of the Professional Affairs Committee, I will attempt to establish an ongoing liaison with other health professions. The objective of this liaison is to open new and reopen old channels of communication for the Association. These channels will hopefully be two-way, and provide additional recognition by others of our activities.

The committee will also address itself to the problem of the multiprescription blank. We, as pharmacists, must understand the physicians' reasons for using such blanks, before we ask them to stop because of problems presented to us.

The Board of Trustees needs to provide the Professional Affairs Committee with a list of other organizations and agencies considered to be of highest priority in its development of the aforementioned liaison.

There was considerable discussion of the problem of illegible physicians' signatures or lack of imprinted physicians' names on prescription blanks contrary to Maryland law, which has a penalty for both prescriber and pharmacist who dispenses such a prescription. The matter will be placed on the committee's agenda. The report was then adopted.

8. SAPhA-MPhA Joint Chapter Committee Report — Margaret Brophy, Chairperson and President of Maryland SAPhA. Thank you for this opportunity to report on the activities of the SAPhA-MPhA Committee. Unfortunately, our committee has not met since it was appointed a few months ago. Most of my free time has been devoted to completing our membership drive and preparing for our Regional Meeting to be held at the end of October. And so I have had no opportunity to arrange to meet with the Committee. As you are aware, this is a newly formed committee. As we have yet to meet, our function has not been defined and our goals have not been set. We are certainly open to suggestions of all Association members on this subject.

   I am aware that MPhA does not include SAPhA members in its membership count. But I am sure that there is still a great deal of interest in student membership. The results of this year's membership drive may prove interesting to some. Last year Maryland SAPhA had 80 members. After graduation our number was decreased to 58. With these figures in mind, I am quite pleased to announce that Maryland SAPhA now has 151 members for the 1976-77 membership year (effective October 1). You may want to incorporate these figures into the report of the Membership Committee for this next House of Delegates meeting. I hope that along with our increase in numbers we will experience an increase in student involvement! As always, we are looking forward to participating in the MPhA House of Delegates.

   Report was adopted.

9. Continuing Education Committee Report — Henry G. Seidman, Chairman. The Continuing Education Committee met on September 29, 1976 at the Kelly Memorial Building. In attendance were members Henry Seidman, Chairman; Noel Bosch, Nathan Friedman, Henry Verhulst, President Melvin Rubin, and Executive Director Nathan Gruz.

   Many general and specific areas of continuing education posture both nationally and in the state were reviewed and discussed. Special reference was made to the status of mandatory continuing education at both these levels.

   The problems of scheduling and programming to avoid conflicts with many types of pharmacy and other functions merited much attention. Programs which the Association would and could do independently and those in which it would share responsibility with the School of Pharmacy were discussed at length. A tentative Continuing Education Program includes the Simon Solomon Pharmacy Economics Seminar in November, the Robert L. Swain Pharmacy Seminar in the Spring, and a series of presentations jointly with the University of Maryland, School of Pharmacy, titled, "The Uses of Auxiliary Label Systems for Providing Patient Information". This series of Seminar presentations will be held at seven sites in the state in conjunction with meetings of local pharmaceutical Associations in those areas such as Allegany-Garrett County, Baltimore Metropolitan, Eastern Shore, Anne Arundel, Prince Georges/Montgomery County, Washington County, and Upper Bay. These seminars are planned between January 1 and April 1, 1977.

   The Committee is anxious to provide programs that will attract the attention and attendance of many of our members and invites your input.

   The report was adopted.

10. Convention and Tours Committee Report — Ronald A. Lubman, Chairman. Details of the forthcoming Acapulco and Colorado trips as well as the Annual Convention at the Carousel Hotel in Ocean City were announced.

11. Board of Pharmacy Report — Board President Earl Kerpelman reported on new pharmacy equipment regulations.

12. Public Relations Committee Report — Charles E. Spigelmire, Chairman, reported on the Association radio programs on WCAO AM & FM and the publicity campaign arranged for the Swine Flu Vaccination project. There was a report on materials to be distributed for Diabetes Detection Week and the plan to publicize radio and TV programs was discussed. The report was adopted.

13. Pharmacy Practices Committee Report — Paul Burkhart, Chairman. The first meeting of the Pharmacy Practices Committee was held on September 30, 1976. The following members were present: Paul Burkhart, Chairman; Mel Rubin, Nathan Gruz, Marvin Oed, Sol Rosenstein and Dorothy Levy.

    The meeting began by reviewing the charge to the committee as received from President Rubin. This charge had previously been distributed to all committee members. General discussion relative to the charge followed with the agreement that if pharmacy is not to be mandated through legislation then both the Board of Pharmacy and the Maryland Pharmaceutical Association must establish certain standards of practice that are ongoing for the profession. It was suggested that total standards of practice for every aspect of pharmacy be established so that when various portions of legislation are introduced a particular standard would act as reference to the association's position. Obviously, it is not within the purview of this committee, either from a human or material resources standpoint, to accomplish such work. This activity would necessitate a special committee. It was noted that the Institutional Pharmacy Regulations, which had been submitted to the Maryland Pharmaceutical Association by the Maryland Society of Hospital Pharmacists, required three years in their preparation. The committee decided to narrow its scope regarding the charge and address itself specifically to:

A. Continuing Education — certification of pharmacists.
B. Patient Profiles and Pharmacy Accreditation — for the voluntary use of these profiles.
C. The establishment of an academy for pharmacists who had been accredited both for continuing education and the use of voluntary patient profiles.

A. **Establish criteria and methodology for certifying pharmacists who have voluntarily completed a prescribed number of continuing education credits.**

MPhA has supported continuing education and has provided continuing education on a regular basis.

Discussion followed regarding last year's continuing education bill and the defeat of that legislation. It was noted that one of the primary reasons for the defeat was due to the lack of funds to establish the proposed council outlined in the bill.

Current activities regarding continuing education are centered around the Tripartite Committee and the Board of Pharmacy. It was suggested that this Committee propose standards to the Tripartite Committee concerning continuing education. Ohio was singled out as one of these states. The activities of the Ohio Board of Pharmacy were outlined briefly and circulated to the committee for review at the next meeting. It was noted that the Ohio Board of Pharmacy in announcing its continuing education program, had previously reviewed, by survey, all programs available for the pharmacists registered in their state. The programs were accredited and certain criteria for continuing education were established. The phase-in period for continuing education credit was extended over a three year period. In an effort to gain more information regarding national activities, the chairman of the committee will invite Dr. Ralph Shangraw, University of Maryland, School of Pharmacy, to the next scheduled meeting.

The committee agreed with the president's charge relative to the certification and will study the matter further.

B. **Establish methods of accrediting pharmacies maintaining and utilizing patient profiles in accordance with accepted APhA standards.**

The committee discussed legislative activities of last year relative to patient profiles. The long form of Delegate Hickman's bill on patient profiles was reviewed so that the committee would have an awareness of the kinds of information that should be included on these documents. It was also noted that this legislation, last year, had been changed to an enabling act charging the Board of Pharmacy with promulgating rules and regulations with respect to patient profiles. The legislation was not passed. The committee further discussed the MPhA policy on medication profiles adapted from the Academy of Pharmaceutical Practice of the APhA, and felt that MPhA could point to this policy as representing a standard of practice for profiles. It was decided by the committee that specifics on accreditation of pharmacies utilizing patient profiles would be pursued.

Areas for future discussion will include:

1. **Recognition** — possible provision of certification for posting in APhA approved pharmacies.
2. **Monitoring** — should or should not the association inspect certified pharmacies.
3. **Possible reimbursement**
    a. It was noted that reimbursement to pharmacists is now on-going for consultation regarding drugs used in treating hemophiliacs in the state of Ohio by the Ohio Blue Cross.
    b. Similar reimbursement had been made for counseling of patients utilizing the drug, Cytazar.

Specific questions the committee felt should be addressed were:

1. Who will certify the pharmacists?
2. Who will decide what courses will be taken?
3. Who will fund these programs?
4. Who will teach the necessary courses?
5. What efforts to date has the association provided in promoting continuing education to meet the needs of individual members?

The committee, upon its decision to support accreditating pharmacies utilizing patient profiles and establishing certification for pharmacists voluntarily completing continuing education credits, will now pursue the information necessary to adequately assess these two areas before moving on toward proposing plans for possible implementation.

In the absence of the chairman the report was presented by Mr. Rubin and adopted.

14. Prescriptions Insurance Programs Committee Report — In the absence of Chairman Marvin Friedman, Mr. Rubin commented on some of the computer problems in Medicaid emphasizing the need to place the usual and customary fee on all Medicaid prescriptions. The State "cost of filling a prescription" survey was discussed.

OLD BUSINESS

1. Presentation of amendments to the Constitution and By-Laws. Speaker Morgenroth turned the chair over to Vice Speaker Lichter to present the report. Amendments to Constitution and By-Laws distributed for study. Will be voted on at Spring Regional Meeting. Speaker Morgenroth then assumed the chair again.

(Continued on Page 27)

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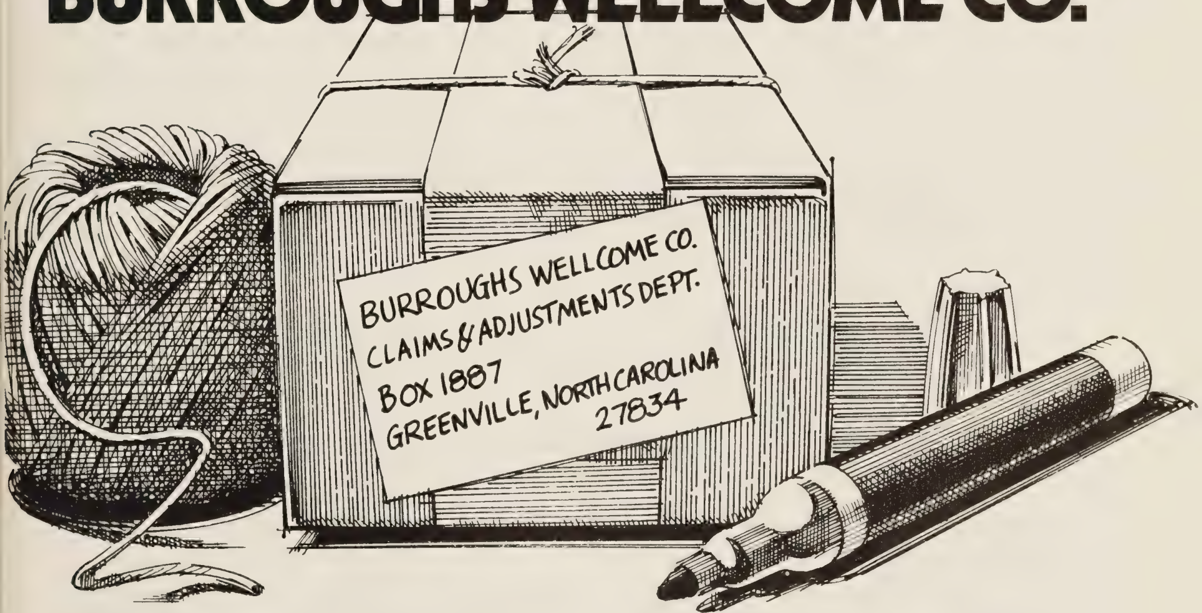

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Eastern Shore Pharmaceutical Society

The Eastern Shore Pharmaceutical Society meeting was held at the Tidewater Inn, October 31, 1976. Following the social hour, President Jerry L. Overbeck of Salisbury called upon MPhA Executive Director Nathan I. Gruz to deliver the invocation. Following dinner President Overbeck presented William C. Hill of Easton to introduce the guest speaker William E. Woods, the Washington Representative and Associate General Counsel of the National Association of Retail Druggists. Mr. Woods, who has been selected as the Executive Director of the NARD with offices in Washington effective January 1, presented an overview of national legislation and NARD programs directed at assisting the owners of independent pharmacies.

Mr. Gruz was then presented to report upon the activities and programs of MPhA. He in turn introduced Melvin N. Rubin, MPhA President, who made a report of his activities and urged the participation of all Eastern Shore pharmacists in MPhA.

Joint MPhA-MSHP Meeting Scheduled January 13, 1977

A joint meeting of the Maryland Pharmaceutical Association and Maryland Society of Hospital Pharmacists has been scheduled for Thursday, January 13, 1977. The subject will be a presentation of the program entitled, "The Use of Auxiliary Labeling Systems for Providing Patient Information", designed to be presented in cooperation with the Maryland Pharmaceutical Association and local pharmaceutical groups. The project is an outgrowth of concern of MPhA which placed the matter before the Tripartite Committee. The project is under the direction of Dr. Ralph Shangraw and Donald Fedder of the University of Maryland School of Pharmacy faculty. Details on the program will be mailed out. All pharmacists are cordially invited and urged to attend.

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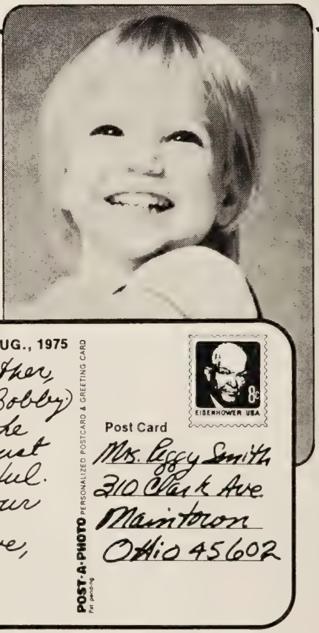

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Fall Regional *(Continued from Page 24)*

2. APhA and NARD dues. The matter previously tabled at the Convention of withholding dues from the national organizations was considered. Consensus was that with the opportunity in 1977 to attend, observe and participate in both national conventions because of their proximity, APhA in New York in May and NARD in Washington in October, no action should be taken at this time.

The House of Delegates then recessed for lunch. The luncheon speaker was Ms. Bertha Finney, Medical Services Specialist of the HEW Philadelphia Region, who spoke on HMO's and health care delivery — where does pharmacy fit in and how pharmacies can start an HMO. After a discussion of possible actions by MPhA in seeking resolution of HMO problems, the House of Delegates reconvened at 2:15 P.M.

NEW BUSINESS

1. Approval of appointment of Executive Director. President Rubin reported the action of the Board of Trustees on October 7, 1976 and requested the approval of the appointment of Mr. Gruz as Executive Director on an interim basis as the Board of Trustees recommended. Mr. Lachman then moved for the appointment of Mr. Gruz as Executive Director for the year ending at the June Convention 1977. Seconded. The motion was challenged as contrary to the Association's constitution. The chair called upon Mr. Earl Kerpelman, parliamentarian, who ruled the motion on the floor out of order, but stated that a motion to amend the Board's recommendation would be in order. Mr. Lachman then moved for approval of the Board of Trustees recommendation with the amendment to state that the interim appointment period of Mr. Gruz be until the next MPhA convention in June 1977. Motion was seconded and passed.
2. HMO's — Donald Schumer reported on the problems concerning prescriptions filled by HMO's and not paid.
3. Resolution presented by the joint SAPhA-MPhA Chapter:

Professional Unity In Maryland

Whereas the need for professional unity is widely recognized by various factions within the profession of pharmacy;

Whereas action *is* being taken to attempt to achieve this unity (as evidenced by recent communications between APhA & NARD);

And whereas we view the existence of two separate organizations, MPhA and MSHP, as unnecessary and even detrimental to the profession of pharmacy in Maryland;

Be it resolved that MPhA take *active* measures to improve and expand relations with MSHP;

And be it further resolved that such measures be undertaken with the ultimate goal of establishing one unified organization for pharmacists in the state of Maryland.

On motion of Mr. Ben Friedman, seconded and passed.

4. Resolution on pornographic reading material presented by Mr. Dorsch on behalf of George Stevenson. The resolution emphasized the objectives of MPhA as a professional pharmacy organization dedicated to the improvement of health care services. It pointed out that pornographic and obscene printed matter was incompatible with this and condemned their sale. It urged members not to distribute or sell such items. The motion was seconded but defeated.
5. Legislative Committee — Mr. Parker moved for adoption of the report including support of Drug Product Selection and to leave the matter of mandatory patient profiles to the Legislative Committee. Mr. Rubin moved for consideration by the Tripartite Committee for mandatory continuing education through Board of Pharmacy regulations. Seconded and passed.
6. MPhA Standard Patient Profile Cards — Vincent Gattone's suggestion for distribution of such a card to members will be referred to the appropriate committee for study.
7. HMO Problems — Don Schumer then presented a statement. See article, "Open Forum" presented elsewhere in this issue.
8. A report was also received from James B. Culp, Jr., Chairman of the School of Pharmacy Committee as follows:

With today's health care system rapidly changing, the question arises: Are we really preparing our pharmacy students with the necessary knowledge for today's professional practice?

It was with this idea in mind, the Pharmacy School Committee was organized. Its main function is to help bridge the gap between pharmacists in their current practice and pharmacy school in their current curriculum. Although this committee has just recently been organized, it is hopeful it will open new lines of communication and ideas for the betterment of the profession of pharmacy.

Excellent headway has already been accomplished in the creation of the Professional Experience Program (P.E.P.). P.E.P. enables the fifth year student to work one month under the supervision of an experienced pharmacist in his or her own practice, whether it be community, hospital, industrial or other. With this daily exposure, the student can gain experience, as well as put school book theories into practice. The program has been highly successful, growing from criticism to the model for similar programs around the country. The P.E.P. staff is now currently setting up criteria for promotions in the faculty rank of preceptors.

Also within pharmacy school itself, the Professional Programs Task Force has begun the task of defining the professional program curriculum by discussing goals or general criteria for the future education of pharmacists. A complete report will follow shortly when details have been discussed.

9. State Cost of Filling a Prescription Survey — Mr. Yaffe urged that steps be taken to get pharmacists to return their surveys.

GOOD AND WELFARE

1. A recent NBC broadcast pointing out services of pharmacists should be publicized.
2. Mr. Lichter suggested that various reports from officers and committee chairmen be submitted early enough for inclusion in the Spring Regional agenda along with the APhA Annual Meeting reports.

The meeting was adjourned at 4:00 P.M. ■

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obituaries

HOWARD L. GORDY

Howard L. Gordy of Salisbury, past president of the Maryland Pharmaceutical Association for 1950-51, died October 14, at the age of 74. He served as a member of the Maryland Board of Pharmacy for two terms from 1962 to 1972.

Mr. Gordy was born at Laurel, Delaware July 13, 1902. Shortly after his graduation from the University of Maryland School of Pharmacy in 1922, he opened Gordy's Pharmacy in Salisbury which he operated until 1972. He served as the first president of the reactivated Eastern Shore Pharmaceutical Society in 1963. It adopted By-Laws requiring its members to be members of MPhA, the first local association to so affiliate with the state association.

He was a member of the Salisbury Chamber of Commerce, a 33rd degree Mason, life member of Wicomico Lodge No. 91, Eastern Shore Shrine Club, Boumi Temple of Baltimore, Past Grand Tall Cedar of Eastern Shore Forest No. 53 and York and Scottish Rite bodies. At the time of his death, Mr. Gordy was serving as President of the Wicomico Chapter of the American Association of Retired Persons. He was a member of the Rockawalkin Ruitan Club.

Mr. Gordy is survived by his wife, the former Hilda Causey, a daughter, Mrs. Betty Anne Shillinger and a son, Howard L. Gordy, Jr., minister of Trinity Methodist Church where the Gordys worship. A brother, John W. Gordy lives in Adelphi.

DAVID FIBUS

David Fibus, 75, who had owned Fibus Pharmacy, died on November 18. In addition to his own pharmacy, Mr. Fibus had also worked for Cooper Pharmacy and Parkville Pharmacy, both in Baltimore. Mr. Fibus was a long-time member of MPhA.

IRVIN SHURE

Irvin Shure, 62, owner of Irvin Shure Drug Company, died on November 14. Mr. Shure had also worked for Sinai Hospital, Leader Drug, and Frederick Memorial Hospital.

A.C.A. Delmarva Chapter

The American College of Apothecaries has approved the formation of the Delmarva Chapter of the A.C.A., Joseph U. Dorsch, Regional Director of Region No. 3 has announced. The following fellows of the A.C.A. were elected to head the local chapter for the coming year. Chairman: Fellow Herbert J. Burns, Co-Chairman: Richard A. Metz, Treasurer: Dudley A. Demarest, Secretary: Barbara E. Dorsch.

The Board of Directors of A.C.A. will meet in Sanibel Island, Florida, January 27 to 29, 1977. Plans have also been completed for the A.C.A. mid-year in Oklahoma City, March 11 to 13, 1977. Further information can be obtained from Chairman Herbert J. Burns, 5903 Hilltop Avenue, Baltimore, Md. 21207.

Open Forum

Third Party Rx Programs

The following statement was written during the Fall Regional Meeting of the MPhA House of Delegates on Thursday, October 4, 1976, at the Ramada Inn by Donald Schumer of Baltimore. Mr. Schumer, a member of the MPhA Rx Insurance Programs Committee, delivered these remarks during the discussion of Medicaid – MAC/EAC – HMO problems.

We have finally reached the time in the practice of providing pharmaceutical services where a stand must be taken in order to insure our ability to operate in the future. Since the inception of the third party programs, we as providers have been offered a set professional fee on a take-it-or-leave-it basis with no power for arbitration. The advent of the HMO program and the MAC/EAC program has insured the financial failure of many pharmacies in the near future.

I could spend an hour or more discussing all the problems created by the government, but I know you are aware of them, otherwise, you wouldn't be here today. The state has provided us with nothing but empty promises, and we are in our present position of being unable to do anything to counteract their blatant disregard for the needs of the providers of health services. I pose one question. Why is it necessary that providers of health services to the needy have to subsidize the programs in order to provide these services?

There is no doubt that within the next 2 to 3 years, 25% to 50% of these providers will no longer be in operation.

By law we are not allowed to take any joint action and take a stand on what we know to be just. As it appears to me at this juncture, we have no choice but to act on a united front and take our chance with the courts or close our pharmacy departments now to prevent the inevitable mental, physical and financial suffering we are guaranteed under present conditions.

I want so desperately to believe that there is yet some justice in our country. Before seeing many fellow pharmacists fall by the wayside, I would hope that they unite to make their problems known to the public, the legislators and the courts.

I would rather take my chance with the courts now than face what the future holds for us under the current conditions. This is a problem I cannot tackle myself. I need the support of every one of you. If you don't unite now under a unified effort to correct these ills, your future demise will be at your own hands.

Donald Schumer, R.Ph.
Baltimore, Maryland

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Nathan I. Gruz, Editor
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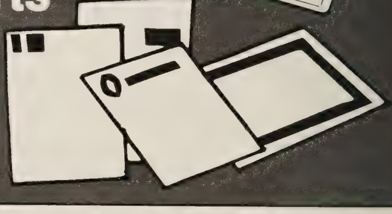

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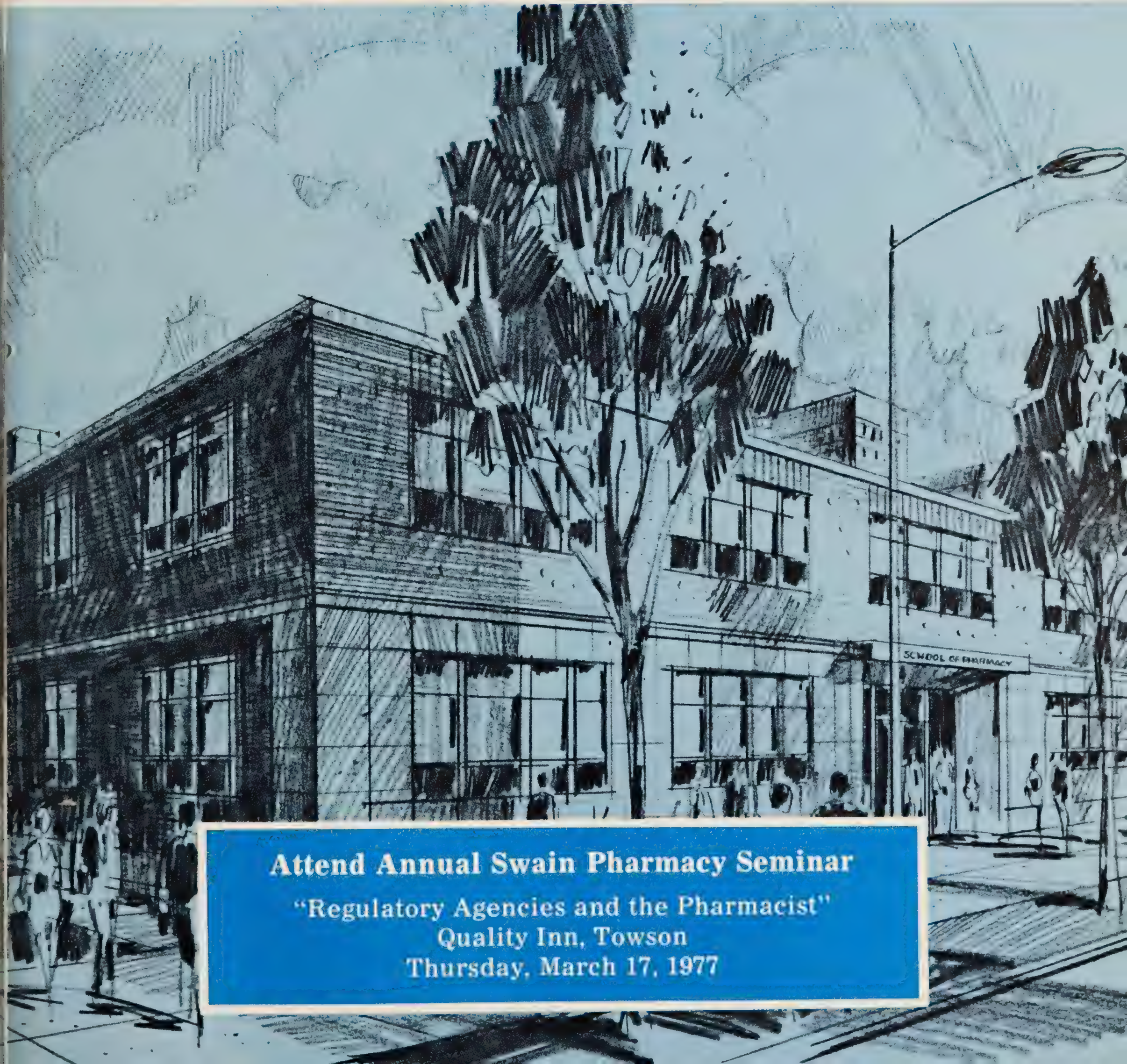

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Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema

[illegible]

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occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.
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editorial

AN ASSESSMENT OF 1976 — HOPES FOR 1977

In 1976 more pharmacists responded to the ancient cry of "in unity there is strength." More pharmacists, particularly graduates of recent years joined their state professional pharmaceutical society. In addition, more from both chain and independent management were at last motivated to contribute substantial sums to PHARMPAC, the pharmacists political action arm.

Although we are still suffering from the absence of all too many pharmacists from all sectors of pharmacy, increased membership and PHARMPAC support enabled MPhA to proceed more aggressively from a position of greater numerical strength and greater funding. This strengthened posture made possible our progress in resolving some of the problems we faced.

MPhA's victories in the state MAC-EAC battle prevented the use of drug cost price lists that would have been damaging. Upon MPhA's insistence equity in pricing has been largely achieved and a system of regular updating of prices with minimum delay has been effectuated. Our efforts have elicited commitment from the State to assume responsibility for payment for all prescriptions dispensed pursuant to all valid Medicaid I.D. cards. As to a Medicaid fee increase, the State at the highest levels promised MPhA action based upon the results of a cost survey. The ill-advised award of a survey contract to a firm unfamiliar with pharmacy operations adversely affected the initial timetable as the contractor has failed to date to come up with valid data that can be used with confidence. We have been reassured that a fee increase will definitely be recommended. Fortunately MPhA did commission a survey in 1976 and these results (published in the September issue of THE MARYLAND PHARMACIST) have been offered and are being reviewed by the State.

Two new committees — Pharmacy Consumer Affairs and Industrial Relations have developed active programs and made substantial progress.

In the legislative area, again there was an excellent box score in supporting positive proposals and in preventing passage of adverse laws. Consumer support has been enlisted in support of an effective "Drug Product Selection Bill" which should receive excellent consideration by the legislature in 1977. The Tripartite Committee has endorsed a patient profile bill and a continuing education requirement with responsibility for implementation by the Board of Pharmacy.

In the area of Standards of Practice, a solid beginning was made and steps have been taken to work with all the health professions in a "Joint Practices Committee" of the Medical Society and allied health professions.

MPhA participated in the Pharmacy Bicentennial Observance and included appropriate programs in the agenda of our functions. The Francis Balassone Memorial Lecture, first proposed by MPhA, and joined in sponsorship by the Alumni Association was presented under the auspices of the School of Pharmacy. Also in the area of continuing education, we conducted worthwhile programs: the Robert L. Swain Pharmacy Seminar, the Simon Solomon Economics Seminar and the bioavailability workshop at our Annual Convention.

Conferences with state regulatory officials regarding new inspection procedures for pharmacies have brought modifications. Much remains to be done both by the State in recognizing professional considerations and by those pharmacists who need to give greater attention to some of the limitless details of the overwhelming mass of both federal and state laws and regulations.

As usual in pharmaceutical association affairs all was not peaches and cream. Internal differences sapped time and energies better devoted to the many professional, economic and governmental headaches which are pressing us. Perhaps before 1977 closes there will be significant progress toward constructive solutions to some of the plagues which are within our power to ameliorate.

— Nathan I. Gruz

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calendar

March 5-13 — MPhA Skiing Trip to Vail, Colorado
March 17 (Thursday) — MPhA Swain Seminar — Quality Court, Towson, "Regulatory Agencies and the Pharmacist."
March 20 (Sunday) — U. of M. School of Pharmacy Annual Alumni Dinner Meeting, Martins West
March 27-April 1 — International Symposium on Drug Activity, Jerusalem, Israel
March 28-30 — NARD National Legislative and Public Affairs Conference, Washington, D.C.
April 17 (Sunday) — AZO Fritz Berman Seminar, Holiday Inn, Baltimore Beltway Exit 17
April 21 (Thursday) — MPhA Regional and House of Delegates Meeting, Friendship International Hotel
May 15-19 — APhA Convention, New York City
June 2 (Thursday) — U. of M. School of Pharmacy Alumni Association Banquet, Eudowood Gardens
June 17-19 — MSHP Seminar, Sheraton Hotel, Ocean City, Maryland
June 19-22 — MPhA Annual Convention, Carousel Hotel, Ocean City, Maryland

Tricyclic Antidepressant Poisoning*

by Gary M. Oderda, Pharm.D.‡

Overdoses of tricyclic antidepressants (TCAs) — imipramine, amitriptyline, doxepin and related compounds — may produce a potentially life threatening intoxication. Since these drugs are used for the treatment of depression, these patients are at high risk for potential suicide attempts.

Absorption and Fate

In therapeutic doses TCAs are rapidly absorbed from the GI tract; complete absorption of amitriptyline occurs within 30-60 minutes.[1] In overdoses, however, anticholinergic effects decrease GI motility and thus absorption is delayed.

TCAs bind to protein and in fact the blood:tissue ratio varies from 1:10 to 1:30.[2] The primary route of excretion is via metabolism in the liver to active and inactive metabolites which are then excreted in the urine. Amitriptyline is first N-demethylated, then further demethylation and hydroxylation occur. Virtually the entire dose is excreted as the glucuronide or sulfate conjugate of these metabolites. Little unchanged amitriptyline appears in the urine.[1]

Following an oral radioactive dose of amitriptyline, approximately 63% appears in the urine in 7 days with about 27% in the first 24 hours. Approximately 10.5% of a single oral dose is excreted in the feces during the same 7 day period.[1] Since amitriptyline is found in the feces following an intravenous dose, biliary excretion is most likely responsible for this finding. Following oral administration of a single dose of amitriptyline the plasma half life is approximately 32-40 hours.[1]

Drug Interactions

Clinically significant drug interactions are well documented. The following are examples of the types of drug interactions that occur. For a complete listing see *Drug Interactions,* Philip D. Hansten, 3rd Edition, Lea and Febiger, 1976.

1) Guanethidine. TCAs block the uptake of guanethidine into the adrenergic neuron and thus inhibit the antihypertensive effect.[3]

2) Epinephrine and Levarterenol. When either epinephrine or levarterenol are given to patients taking TCAs, an exaggerated pressor response is seen. Dysrhythmias have also been reported.[3]

3) Anticholinergics. When other drugs with anticholinergic effects are taken, additive anticholinergic effects are seen. This includes such drugs as antihistamines, phenothiazines, antiparkinson drugs and glutethimide.[3]

Inherent Toxicity

Discussion of potentially fatal doses of TCAs is difficult since there is so much individual variation. Patients have survived doses that are much greater than those considered potentially lethal. If one consideres amitriptyline for example, fatalities have been reported following the ingestion of as little as about 500 mg in an adult and between 375 and 500 mg in a 2 year old child.[1] Yet, survival has occurred following an acute dose of 3925 mg (157 25 mg tablets) in an adult[4] and 1750 mg (135 mg/kg) in a 2 year old child.[5]

If one considers one gram to be a potentially lethal dose, an adult patient maintained on 150 mg of amitriptyline per day would have this amount in as little as a one week supply. The acute ingestion of a month's supply, 4500 mg, is potentially fatal in most adults and thus dispensing large quantities of TCAs is to be discouraged.

Clinical Effects

Major side effects seen following therapeutic doses of TCAs include CNS depression, orthostatic hypotension, arrhythmias, anticholinergic symptoms, such as blurred vision, dry mouth, constipation, urinary retention, tachycardia, and arrhythmias. Many of these effects are also seen following large acute doses.

Acute overdoses produce toxicity in two major areas: the central and peripheral nervous systems and the cardiovascular system. Central nervous system effects are usually the first toxic signs encountered. Effects of central nervous system depression including agitation, lethargy, delirium and coma are seen. The coma produced by TCAs is usually of relatively short duration — 18-24 hours. Hallucinations and convulsions are seen in some patients as well as muscle twitching, and movement disorders such as myoclonus and choreoathetosis.[6] Respiratory depression may also occur.

Peripheral anticholinergic effects, e.g., dry mouth, dilated pupils, decreased GI motility, urinary retention, commonly occur. Both hypo and hypertension have been reported. It has been theorized that since TCAs deplete norepinephrine from axonal granular stores and block its reuptake into the axon, the initial hypertension may be a result of the released norepinephrine. As the norepinephrine is broken down by MAO and COMT, hypotension occurs.[7] The alpha blockade produced by TCAs may also produce the hypotension.[7]

The effects on the cardiovascular system are both complex and the potentially most life threatening.

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*This article is intended to be a basic overview of Tricyclic Antidepressant Poisoning that would provide the practicing pharmacist with useful information. If further information is desired, contact the author.

‡Director, Maryland Poison Information Center
University of Maryland School of Pharmacy

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Tricyclic *(Continued from page 8)*

Arrhythmias of almost every type have been reported including supraventricular tachycardia, ventricular tachycardia, bundle branch block, atrioventricular block, etc. Some of the cardiovascular effects are anticholinergic in nature and others are thought to be a direct effect of TCAs on the myocardium. Since fatal arrhythmias have been reported as late as 6 days after ingestion, careful cardiac monitoring is critical.[8]

Treatment

1) Supportive therapy as with other intoxications, especially of the respiratory and cardiovascular systems, is of critical importance.
2) Decrease absorption. Emesis or lavage followed by activated charcoal and a saline cathartic are indicated even several hours after ingestion. For a further description of these processes see the MARYLAND PHARMACIST, January 1974 and February 1974.
3) Hypotension should first be managed with IV fluids. Pressor agents may be used if needed but must be used cautiously in these patients because of their arrhythmogenic potential.
4) Antidote. The TCA anticholinergic effects may be reversed with an anticholinesterase agent such as physostigmine. Physostigmine is preferred over neostigmine since the former is a tertiary amine and will cross the blood brain barrier and reverse central anticholinergic effects. Although physostigmine will reverse dry mouth, CNS depression, etc., it should not be used for this purpose but rather to treat only severe symptoms such as convulsions, severe hallucinations, hypertension and arrhythmias.[6] Physostigmine should be administered slowly intravenously. Since its duration of action is short, it may need to be repeated as frequently as every 30-60 minutes if symptoms recur.
5) Convulsions unresponsive to physostigmine should be treated with IV diazepam.
6) Arrhythmias unresponsive to physostigmine may be treated with intravenous phenytoin.
7) Forced diuresis, peritoneal dialysis or hemodialysis are NOT effective and should not be considered.

Acknowledgements

Special thanks to Jacquelyn Lucy, M.A., M.Ed., Robert Varipapa and Ethyl Frost for reviewing the manuscript and to Annette Byers for typing.

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International Symposium on Drug Activity Set for Israel in March

An International Symposium on Drug Activity will be held in Jerusalem, Israel, from March 27 to April 1, 1977. Organized by the Hebrew University School of Pharmacy and sponsored by the International Pharmaceutical Federation (FIP) Board of Pharmaceutical Sciences, this international meeting will provide an opportunity to exchange ideas with scientists from all parts of the world on drug metabolism, pharmacokinetics, bioavailability, drug delivery systems and biochemical approaches to medical research and development.

The symposium opens Sunday, March 27, 1977, with plenary scientific lectures schedules for Monday and Tuesday mornings, March 28-29. Scientific symposia are set for the same afternoons, with a special session on pharmaceutical education to be held Monday evening, March 28. Wednesday, March 30 is to be devoted to professional tours, and Thursday, March 31 will include a scientific session and the presentation of papers. The symposium concludes Friday morning, April 1, with a panel session.

General Chairman is Dr. Joshua Kohlberg of Tel Aviv, with Associate Dean Avraham Kreiser of the Hebrew University School of Pharmacy as Organizing Chairman. Dr. Gerhard Levy of Buffalo, New York; and Professor S. Sarel of Jerusalem serve as joint Scientific Chairmen.

Registration fees have been set at \$100 (\$120 after January 1, 1977, for participants), and \$60 for accompanying persons.

Three different tours sponsored by the American Pharmaceutical Association have been organized by Group Travel Unlimited, Inc. of Washington, D.C. in cooperation with Compass Tours/Peltours and El Al Israel Airlines for those attending this major international conference. Tour 1 consists of 11 days in Israel departing New York City March 26 and returning April 5; while Tour 2 includes 14 days in Israel departing New York City March 19 and returning April 1. Tour 3 offers 11 days in Israel plus two days in Athens and a three-day cruise; this tour departs New York City on March 26 and returns on April 11.

For registration and accommodation forms as well as a detailed tour brochure with both a group travel registration form and an individual travel registration form, write APhA Division of Communications, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.

Seminar Note: Register NOW for the Robert L. Swain Pharmacy Seminar, March 17, 1977 at the Quality Inn, Towson, by contacting the MPhA office, 727-0746.

OLDEST IN THE SOUTH

A History of the School of Pharmacy University of Maryland

By B. F. Allen, Ph.D.*

The first suggestion of a College of Pharmacy in Baltimore emanated from Dr. William R. Fisher (he held the degree of M.D.), a native of Philadelphia, who settled here in 1827 at the age of nineteen, and established a pharmacy in the city about 1834. He was Professor of Botany in the School of Arts and Sciences of this University and one of the leading spirits in the Maryland Academy of Science and Literature. In 1837, he was made professor of Chemistry in the School of Medicine.

Of Dr. Fisher's "plan" nothing is known except that he had formed one, and that it met with favor among his colleagues of the Medical and Chirurgical Faculty. A sudden illness prevented his participation in its execution. He returned to Philadelphia in 1839 and recovered sufficiently to occupy a professorship in the Philadelphia College of Pharmacy. He died at Hohnesburg, near Philadelphia, in 1842 at the early age of thirty-four.

In 1837, a convention of Eastern Shore physicians who met in Easton, Maryland made a demand on the General Assembly in Annapolis for the establishment of a college of pharmacy.

The School of Pharmacy of the University of Maryland, originally the Maryland College of Pharmacy, is now in the one hundred and thirty-fifth year of its existence (the oldest Pharmacy School of the south). In 1841, there were seventy-seven drug stores in Baltimore City. The more forward-looking proprietors of these stores realized that broader and more thorough education and training than could be obtained through employment in a drug store must be provided for their apprentices if the citizens of the Commonwealth were to be properly served. These proprietors joined with some of the more progressive physicians of Baltimore City (several were associated with the University of Maryland) in organizing the Maryland College of Pharmacy, which was incorporated on January 27, 1841, and which began to function as a teaching institution in November of the same year.

A store of this early period was that founded in 1824 by Mr. Thomas G. Mackenzie at the northeast corner of Baltimore and Gay streets. Associated with Mr. Mackenzie in this venture were his father and two brothers, all prominent physicians.

Thomas G. Mackenzie (1802-73) was the great moving spirit in establishing the Maryland College of Pharmacy. He was one of the organizers (1840) as well as one of the incorporators (1841) of the college. The lectures at the new institution were given in his little office (back of drug store) which was not larger than the hall of a home. In the absence of the regular lecturers, Mackenzie gave occasional talks to the students. The college functioned at this location during the period 1840-44. The first class consisted of six young men, but only three graduated in 1842 (Frederick A. Cochrane, Alpheus P. Sharp and William S. Thompson).

In the spring of 1844 a committee from the Maryland College of Pharmacy was appointed to endeavor to make an arrangement with the Faculty of Physic of the University for a union of the two institutions.

On April 24, 1844, the Maryland College of Pharmacy entered into an arrangement with the Faculty of Physic of the University of Maryland whereby the lectures of the College of Pharmacy were to be united with those of the University so as to enable the students of medicine to have the benefit of the lectures on pharmacy, in return for which the students of pharmacy were to enjoy the privilege of attending the lectures on chemistry by the dean of the Faculty of Physic. The lectures on pharmacy were delivered in the amphitheater of "Old Main" (now Davidge Hall) located at Lombard and Greene Streets. (Tradition has it that a large crowd of anxious Baltimoreans viewed the spectacular firing on Fort McHenry from the front entrance of this building, the events that led to the writing of the Star Spangled Banner in 1814.)

At this time it was decided to elect a professor of pharmacy to deliver the course of lectures. Dr. David Stewart, who had in this year (1844) taken his degree in medicine at the University was elected to the professorship. The name of the chair of pharmacy thus created on April 30, 1844 was the first in this country.

David Stewart (1813-99) was born in Port Penn, Delaware. He arrived in Baltimore at the age of 18 to study pharmacy and chemistry. David Stewart and his brother James opened a drug store on Charles and Lexington Streets (1839) and later at Hanover and Camden Streets (1841). He became active in politics as well as civic affairs and was a member of the City Council (1835-37), School Commissioner (1836), State Senate (1840), Inspector of Drugs (1850-53), State Agricultural Society Chemist (1855-62) and at the same time professor of Chemistry and Natural Philosophy at St. John's College in Annapolis.

The arrangement with the Faculty of Physic continued in force until the year 1847, when the interest in the college of pharmacy began to decline. For nine years the college lay paralyzed and it was not until the year 1856 that interest in the institution was again revived. On February 20, 1856 thirty-one apothecaries met at a hall on the corner of Lexington and Eutaw Streets and helped reorganize the college (it appears some classes may have been held at this location).

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*Dr. Allen is Associate Professor of Pharmacy, University of Maryland School of Pharmacy.

In the fall of 1856, the College rented a room at the corner of Calvert and Water Streets, fitted it with requisite furniture and apparatus, and made all arrangements for a resumption of an active college career, to which there has been no interruption to the present time.

In 1858, the College was located in a rented room of the Maryland Medical and Chirurgical Building, 47 North Calvert Street; and in 1868 at Number 12 West Baltimore Street, a few doors west of the bridge crossing Jones Falls (Fallsway today).

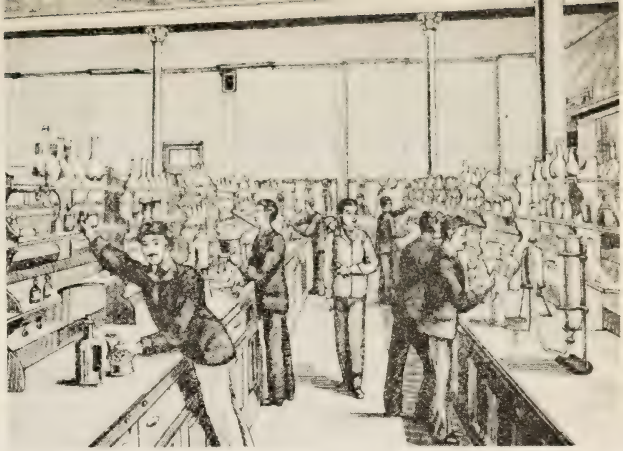
Meanwhile a large increase had taken place in the number of students, and there had also been improvements and increases in the course of instruction, all of which necessitated the providing of larger accommodations. In accordance with these needs, in 1876 the College purchased from the city a granite-front building on Aisquith Street just north of Fayette Street, on the east side, which was used as a public grammar school (this building closely resembled the McKim school house which stands today at the corner of Baltimore and Aisquith Streets and is considered a gem of classic architecture).

In the Spring of 1886, further increase of accommodations was called for, and it was decided to erect a new building upon the site of the one then occupied. An architect was consulted, and a handsome structure (frontage of sixty-seven feet and a depth of eighty-five feet, and three stories high) was erected at a cost of $35,000 and occupied during the latter part of the session of 1886-87.

About 1898 the subject of a union of the College with the University of Maryland became first bruited about as a possibility. The formal mention of union was made by the Dean of the Faculty of Physic, at the annual meeting of the Medical Alumni Association in this year. He spoke of proposed new Schools or Faculties, especially for the purpose of the authorities of the University to seek affiliation with St. John's College (Annapolis) and the Maryland College of Pharmacy. Also of considerable interest is that back in 1882, the Faculty of Physic of the University of Maryland secured a charter from the Legislature of the State of Maryland for a Department of Pharmacy to be added to the School of Medicine.

The Legislature approved a supplementary Act on March 21, 1882 authorizing the Regents of the University to grant the degree of Doctor or Licentiate in Pharmacy upon anyone who had served an apprenticeship of four years with some competent pharmacist, and shall have attended at least two full courses of lectures in the theory and practice of pharmacy, and at least one full course in qualitative analysis, and shall be at the time of receiving the degree at least twenty years old.

Therefore, the Faculty of Physic made the first overtures, which were favorably received by the authorities of the College, and the union was officially concluded on July 7, 1904 and the Maryland College of Pharmacy became the Department of Pharmacy of the University of Maryland.



This sketch of an early pharmacy school laboratory was taken from a school catalogue, late 1800's.

By this arrangement, the College assumed the same relations to the University as the Department of Dentistry (established in 1882). Besides the greatly improved location and the very desirable and stimulating influences of University life, the students were able to participate in Medical Department lectures and laboratory instruction.

Accommodations were provided for this department in the new Dental Building, erected in 1903-04, on the east side of Greene Street, corner of Cider Alley. (This building, although no longer devoted to its first use, has been thoroughly overhauled many times, and is now known as the Medical Technology Building, 31 South Greene Street.)

Classes for the session 1904-05 opened in the building on the University grounds, corner of Greene and Lombard Streets. The office and pharmacy laboratories were located in the new Dental Building. The chemistry and microscopical laboratories were located in the Gray Laboratory (erected about 1894 and it is still in active operation today, situated behind the old medical building now known as Davidge Hall). Lectures were held in Gorgas Hall of the Dental Building and in the Amphitheatre of the old Medical Building (erected in 1813).

The change from an isolated School to a Department of a University proved satisfactory and advantageous. The University authorities felt that they had gained in this College, with its fine traditions and its long and successful career, a valuable ally and associate. The pharmacist, with his systematic habits and business methods, and, above all his common sense ideas — which are perhaps not so common or conspicuous in our less practical professions — was expected to bring to bear upon the staid circles an influence and an example that would contribute powerfully for their betterment.

In 1904, the Maryland College of Pharmacy (49 North Aisquith Street) terminated its independent existence and amalgamated with the School of Medicine. It was

(Continued on page 15)

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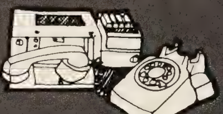

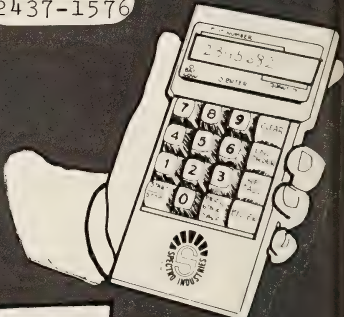

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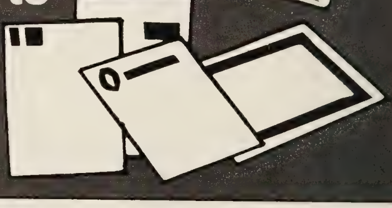

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A History *(Continued from page 13)*

also the year of the Great Fire in the Monumental City. The blaze started on Hopkins Place near Lombard Street, the site today of the Federal Building in Hopkins Plaza.

In 1907, the University was composed of only two Colleges or Faculties — Law and Medicine — the latter having attached to it subordinate departments of Dentistry and Pharmacy. At this time, someone stated, it was an anomaly that the School of Pharmacy should be a mere appendage to the School of Medicine — a change which would occur if the Baltimore institution became a great State University.

In 1920, the University of Maryland (Baltimore) was merged with the Maryland State College (College Park) and the combined institutions became the State University, the old name, University of Maryland, being continued. Following this merger, the Department of Pharmacy became the School of Pharmacy of the new University of Maryland.

On April 22, 1922, the Schools of Dentistry and Pharmacy received the deed for the property known as 27 South Greene Street, consisting of the old church and parsonage buildings of the Emanuel Evangelical Church (the present site of the Bressler Research Building). A third floor, with a stairway leading to it, was built into the body of the church building, and other necessary partitions, etc. were put in place. The School of Pharmacy moved into this building with its decorated church ceiling and stained glass windows, early in November 1922. The laboratories for chemistry and pharmacy were moved to this building. Lectures were given on the first and second floors and in Gorgas Hall of the Dental Building (some laboratories in this building were also used). The upper floors of the parsonage provided office space, as well as storage and preparation rooms.

The School of Pharmacy session of 1925-26 opened with a student body of two hundred and forty. This was an increase of one hundred and forty-one students from the session of 1921-22. Therefore, additional space was needed not only to care for the students, but also for the increase in the number of classes due to the establishment of the three-year program.

Several alumni, disappointed in their efforts to secure funds from the State of Maryland, formed the Greene Realty Company and purchased the building at 6 and 8 South Greene Street for $32,000 (North hospital building occupies this site at the present time).

The building was a four story factory-type structure (often referred to in later years as the Box Factory by many former students and faculty members), and after some refurbishing, was occupied by the School of Pharmacy on October 2, 1926. (This building was leased to the University of Maryland, at a nominal rent by the alumni group.)

New laboratories for dispensing pharmacy, physics and zoology were equipped in this building. The offices, reading room and library were established on the first floor. However, the old Church and Dental buildings were still used for the remaining courses in the pharmacy program.

The remarkable growth in matriculation continued and additional space for the School became a necessity. In order to give the overcrowded school some more space, plans were formulated to erect a building on the northwest corner of Lombard and Greene Streets. (Space in this building was to be available also to the Dental School.)

In 1927 the Legislature appropriated $422,000 for the sole purpose of erecting a six-story building to be used by the Schools of Pharmacy and Dentistry. In addition, $55,000 was appropriated so that the two schools would have adequate equipment in the way of apparatus and other necessities such as furniture, and so forth. (At this time it may be interesting to know that of the expenses incurred in teaching pharmacy, $220 of that was contributed by the annual fees from the students and only $36.36 was appropriated by the State.)

Construction of this new modern unit of the University to meet the needs of the Pharmaceutical and Dental professions started in 1928 and was to be the beginning of a modern educational plant for the Baltimore schools.

The fine new structure erected by the State at the corner of Lombard and Greene Streets was dedicated on Saturday, May 10th at the close of the Great 1930 Baltimore Convention of the American Pharmaceutical Association. The formal dedication of the new building marked a new epoch in pharmaceutical education. The event emphasized the great changes which have come about in the training of those entering the pharmaceutical profession.

When the school moved into the new building, a new department was instituted to give instruction in physiological drug testing, pharmacology, toxicology and therapeutics. The pioneer laboratory for ''Drug Testing'' was so successful that it was used as a model for similar installations throughout many other progressive pharmacy colleges in the United States.

Since the new building also housed the School of Dentistry it soon became known as the Dental-Pharmacy Building (now, after extensive and expensive renovations known as the Allied Health Professions Building).

In 1954, the University received an appropriation of $575,000 for the initial phase of a new building for the School of Pharmacy. Early in 1958 (January 6) the building opened its doors for classes. The new structure consists of a basement and two floors and is located at 636 West Lombard Street.

This building was named after Dr. H. A. B. Dunning, a distinguished alumnus of the School of Pharmacy, a chemistry professor at the school for many years, and former president of the Baltimore firm of Hynson, Wescott and Dunning (first manufacturing company to produce mercurochrome).

The curriculum of the school, developed constantly since 1841, in keeping with the trends in pharmaceutical education has always provided competent professional pharmacists with a good liberal and general education.

(Continued on page 20)

Francis S. Balassone Memorial Lecture

The first annual Francis S. Balassone Memorial Lecture was held November 18, 1976 at the new freshman medical school lecture hall on the Baltimore Campus of the University of Maryland. Participating in the program were (photo, left to right): Dr. George P. Hager, professor, School of Pharmacy, University of North Carolina; Frank E. Kunkel, president, National Association of Boards of Pharmacy; Mrs. Francis S. Balassone; Dr. Robert K. Chalmers, associate dean, Purdue University School of Pharmacy and member of the National Commission on Pharmacy; and Dr. William J. Kinnard, Jr., dean, University of Maryland School of Pharmacy.

At the June 8, 1972, meeting of the Board of Trustees of the Maryland Pharmaceutical Association, a committee was appointed by Bernard B. Lachman to investigate a suitable commemoration to Francis S. Balassone. This proposal had been presented by the Executive Director Nathan I. Gruz, with the following committee approved: H. Nelson Warfield, Simon Solomon and Norman J. Levin. A joint committee with Alexander J. Ogrinz as Chairman was formed with the Alumni Association. The committee agreed to establish a fund for a memorial lecture. An agreement was consummated between MPhA, the Alumni Association and the University of Maryland School of Pharmacy whereby the University would administer the fund and present the lecture. The annual lecturer is chosen by a committee composed of representatives of the three sponsoring groups.

FRANCIS S. BALASSONE
(1915-1972)

Francis S. Balassone was born in 1915 in Thomas, West Virginia, the locale of his early education. After graduating from high school, he worked in coal mines near his home to aid his family and to earn income to further his education that opened for him a pharmacy career through which the profession of pharmacy is a generous beneficiary.

In 1940, the University of Maryland School of Pharmacy conferred on him the degree of Bachelor of Science in Pharmacy. Thence extending his pharmacy experience he associated himself with two Baltimore drug firms; first as chemist with the Standard Pharmaceutical Corporation and next as general manager and vice president with the Yager Drug Company. Francis Balassone interrupted his career with the Yager firm to enlist as a private in the United States Marine Corps for World War II. In 1946 he was mustered out as a captain. During the ensuing five years he resumed his association with the Yager concern and also joined the teaching staff at his Alma Mater.

Diversifying his career, Francis Balassone became owner-manager of the Overlea Pharmacy in Baltimore, 1951-56. Subsequently, he served his state and his profession for nearly two decades, as Commissioner and Secretary-Treasurer, Maryland Board of Pharmacy; Chief, Division of Drug Control, Maryland State Health Department and Acting Director, Bureau of Consumer Health Protection.

Manifestations of his service, leadership and counsel are indicated in the following: Delegate, United States Pharmacopoeial Convention; Delegate, Office of Emergency Planning, Executive Office of the President; President, National Association of Boards of Pharmacy; Member, American Council on Pharmaceutical Education; President, Central Atlantic States Association of Food and Drug Officials of the United States; and Chairman, Program Area Committee on Drugs, American Public Health Association.

Francis Balassone served as President of his Alumni Association and also as Secretary and later as President of the Baltimore Branch, American Pharmaceutical Association. During his tenure as Secretary of the Board of Pharmacy he served as an ex-officio member of the executive bodies of the Maryland and Baltimore Metropolitan Pharmaceutical Associations.

A leader in the development of state drug laws, he gave impetus and guidance to recent Maryland legislation that led to the passage of the Controlled Dangerous Substance Act which was used by Federal officials in constructing comparable Federal legislation and also to the enactment of legislation known as the Mini Food and Drug Law.

Under the leadership of Francis Balassone, Maryland became the first state in the national to replace the traditional pharmacy internship with an academic professional experience program. Untiringly he collaborated with the School of Pharmacy in the development and evolvement of the new University of Maryland professional pharmacy program.

Awards conferred on Francis Balassone include the School of Pharmacy Alumni Association Honored Alumnus Award; the Merit Award, Central Atlantic States Association of Food and Drug Officials of the United States and the Nation's highest award in the field of drugs, food and cosmetic law, the Harvey W. Wiley Award.

(left to right) *Dr. George P. Hager, Frank E. Kunkel, Mrs. Francis S. Balassone, Dr. Robert K. Chalmers, and Dr. William J. Kinnard, Jr.*

TRIBUTE TO FRANK BALASSONE

George P. Hager, Ph.D.
Professor
School of Pharmacy
University of North Carolina

Thursday is Thanksgiving. Tonight we should give thanks to our Creator for all persons — still living or now departed — who have enriched our lives in so many wonderful ways. It is in every way appropriate that I preface in this way anything I shall say in memoriam of Frank Balassone.

I know that Francis S. Balassone — Frank — would join me tonight in a sincere acknowledgement of the great debts he and I share owing to the pharmacists of Maryland and the members of the MPhA — to the past and present faculty and the alumni of the University of Maryland's School of Pharmacy — and to the beloved members of our families, especially as they are represented here by Dolores and Margaret. I would fail utterly tonight if I did not exercise to the fullest the great privilege and honor of expressing in Frank's behalf as well as my own sincerest gratitude and most humble acknowledgement to each and everyone present tonight and to many more not present and, indeed, to many who, by God's grace, Frank has already joined and with whom we, at our appointed times, will gather together in a new communion that will endure forever.

In discussing with Al Ogrinz what would be appropriate to bring out on this occasion, I summed up my impression of Frank in one word — "Lincolnesque." I honestly don't know whether my great admiration of Frank stems from my admiration of this greatest of Americans — Abraham Lincoln — or *vice versa.* I do know that on my scale of values this ranks as absolutely the highest praise I can express. I also know that I am not alone in this high appraisal because Al subsequently wrote me, "Personally I think your Lincolnesque approach is most appropriate (in talking about Frank)."

As Lincoln — Frank had humble origins in the mountains of West Virginia — humble origins of which he was fiercely proud.

As Lincoln — Frank performed a boot strap operation in his career development starting with his role as a coal miner and (part-time) barber in Thomas, West Virginia and, through constant hard work, completing the B.S. in Pharmacy curriculum at the School of Pharmacy in 1940.

As Lincoln — Frank had a great physical strength which he never flaunted but which commanded a degree of awesome respect even when he was initiated into the Phi Delta Chi Fraternity — somehow the hazing was tempered by realization of the size of his biceps. Characteristically, he was later elected the Fraternity's president (or "Worthy Chief Counsellor"). No one put into practice more faithfully the Fraternity's motto, "Alterium Alterius Auxilio Eget" (or each needs the help of the other).

Frank, *as Lincoln,* served his country on the battlefield. In World War II, during a four-year period, Frank was a line officer in the Marines and he separated from the Service with the rank of Captain.

As Lincoln — Frank was a superb statesman. A news release at the time of his death published by the American Council on Pharmaceutical Education stated that "Balassone's administrative background in public health, drug and pharmacy (law) enforcement, along with his judicious sense, his keen sense of fair play at the council table — his friendly words of encouragement — his eagerness to go beyond the call of duty — will make him especially missed by his colleagues on the Council. His warm, human traits will be treasured, and he will . . . be an inspiration to us all for the rest of our lives."

Most of all — *as Lincoln,* Frank's compassion for others (his love for others that need not be requited to be effective) was evident in many, many ways that can only be exemplified by his unselfish concern for his friends and by the tireless, devoted services he rendered in helping them in times of need. I could give many personal, first-hand examples — as when Frank, alone, among all my friends (even my sweetheart) saw me off on the Shenandoah at Mount Royal Station after we had had dinner together at the Deutsches Haus. I was leaving home for the first time with a brand new B.S. in Pharmacy degree to do graduate work in far off Colorado. I needed the support of a friend then. Frank perceived my need and acted accordingly.

Nor was this by any means an isolated instance. For example, Mr. Nelson Warfield, on the occasion of the dedication of the Francis S. Balassone Memorial Lecture Hall in 1973 stated, "I recall how devoted (Frank) was to Charles Austin, his very close friend and colleague on the Board of Pharmacy — during his extended illness — no burden was too great for him to carry — and afterwards his assistance, advice, and counsel to Mrs. Austin (was) of great help and comfort to the widow of Charles Austin." Note also a press release by the ACPE which stated, "Frank will long be remembered by his colleagues for his spirit of friendly helpfulness. Among one of his last acts was that of befriending the widow of

(Continued on page 25)

Who Can Give Information About Drugs in a Pharmacy?

Because of legislation initiated and drafted by the Maryland Pharmaceutical Association only a pharmacist or pharmacy extern can give information about drugs and medicines and their therapeutic values, potential side effects, and uses in the treatment and prevention of diseases in Maryland. The bill was introduced by Delegate Torrey Brown, a physician.

The law in effect recognizes that in a pharmacy there is a specific health professional who is particularly qualified by education and training to counsel a member of the public who seeks information and guidance about medication.

By contrast, in establishments other than a pharmacy, the public is open to the dangerous practice of receiving advice and recommendations about drug therapy from clerks with no qualifications in providing health care. A host of the ''over-the-counter'' remedies so readily available in all kinds of outlets contain potent drugs, many of which require a physician's prescription in larger doses. Pharmacists should take every opportunity to educate the public that their health and often their very lives are at stake. When people seek advice from unqualified employees of emporia, such as supermarkets and variety stores, they are playing Russian roulette. Only in a pharmacy is there a person, as required by law, who is competent to answer the public's questions about drugs factually and to direct people to the proper medical practitioner as indicated.

In this issue of THE MARYLAND PHARMACIST you will find a poster suitable for display in pharmacies. We suggest that the poster be attached to a stiff cardboard or a sign with an easel back. Place this important message in a prominent place. Clerks in pharmacies can point to the sign as a backup for patrons requesting information. It will make referring them to the pharmacist on duty much easier. Over a period of time it will go a long way in getting the public to accept the fact that the pharmacy is the place to get medication because
YOUR NEIGHBORHOOD PHARMACIST CAN
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Dennis F. Rasmussen (D) 418 Eastern Blvd., Baltimore, Md. 21221
Michael H. Weir (D) 1707 Cape May Rd., Baltimore, Md. 21221

DISTRICT 8–Baltimore County
John S. Arnick (D) 2 N. Dundalk Ave.,Balto., Md. 21222
Daniel J. Minnick, Jr. (D) 2421 Fairway, Balto.,Md. 21222
Patrick T. Welsh (D) 1930 Midland Rd.,Balto.,Md. 21222

DISTRICT 9–Baltimore County
John W. Seling (D) 8025 Phila. Rd., Balto.,Md. 21237
George E. Heffner (D) 7921 Belair Rd., Baltimore, Md. 21236
William Rush (D) 3307 Putty Hill Ave., Baltimore, Md. 21234

DISTRICT 10–Baltimore County
F. Vernon Boozer (R) 614 Bosley Ave., Towson, Md. 21204
Thomas B. Kernan (D) 1600 White Oak Rd., Baltimore, Md. 21234
William M. Linton (R) 312 LHOB, 6 Bladen St.,Annap.,Md. 21204

DISTRICT 11–Baltimore County
Bert Booth (R) 11231 Greenspring Ave., Lutherville-Timonium, Md. 21093
Thomas W. Chamberlain, Sr. (R) 307 Galway Rd., Lutherville-Timonium, Md. 21093
A. Wade Kach (R) 15 Berkshire Dr., Reisterstown,Md.21136

DISTRICT 12–Baltimore County
Arthur S. Alperstein (D) 4104 Balmoral Circle, Baltimore, Md. 21208
Theodore Levin (D) 626 Ralston Ave., Baltimore, Md. 21208
Howard J. Needle (D) 505 Alex Brown Bldg.,102 W. Penn. Ave., Towson,Md.21204

DISTRICT 13–Baltimore County
Timothy R. Hickman (D) 16B Montrose Manor Court, Baltimore, Md. 21227
J. Edward Malone (D) 5536 Oakland Rd., Baltimore, Md. 21227
Louis P. Morsberger (D) 612 Hilton Ave., Baltimore, Md. 21223

DISTRICT 14
Sub-District 14A–Montgomery County
Joel Chasnoff (D) 8728 Colesville Rd., Suite 1204, Silver Spring, Md. 20910
Sub-District 14B–Howard County
Hugh Burgess (D) 8900 Frederick Rd.,P.O. Box 126,Ellicott City,Md.21043
J. Hugh Nichols (D) P.O. Box 126, Ellicott City, Md. 21043

DISTRICT 15
Sub-District 15A–Montgomery County
Jerry H. Hyatt 9900 Main St., Damascus, Md. 20750
Sub-District 15B–Montgomery County
Arthur S. Drea, Jr. (D) 7809 Rydal Terrace, Gaithersburg,Md. 20855
Judith C. Toth (D) 6611 80th Place, Cabin John,Md.20034

DISTRICT 16–Montgomery County
Marilyn Goldwater (D) Suite 223A, LHOB,6 Bladen St.,Annap.,Md.21404
Nancy K. Kopp (D) Suite 223B, LHOB, 6 Bladen St.,Annap.,Md.21404
John X. Ward (D) 7801 Maple Ridge Rd., Bethesda, Md. 20014

DISTRICT 17–Montgomery County
Robert A. Jacques (D) 14 S. Adams St.,P.O. Box 1488, Rockville,Md. 20850
Joseph E. Owens (D) 13619 Grenoble Dr.,Rockville,Md. 20853
S. Frank Shore (D) 224 LHOB, 6 Bladen St.,Annap.,Md.21404

DISTRICT 18–Montgomery County
Charles A. Docter (D) Suite 801, 1707 H St., N.W., Wash , D.C. 20006
Donald B. Robertson (D) 7003 Delaware St., Chevy Chase, Md. 20015
David L. Scull (D) 8717 Susanna Lane, Chevy Chase, Md. 20015

DISTRICT 19–Montgomery County
Helen L. Koss (D) 3416 Highview Court, Wheaton, Md. 20902
Lucille Maurer (D) 1023 Forest Glen Rd., Silver Spring, Md. 20901
Eugene J. Zander (D) 2013 Franwall Ave., Silver Spring, Md. 20902

DISTRICT 20–Montgomery County
Sheila Hixsen (D) 1008 Broadmore Circle,Silver Spring,Md. 20904
Alexander Bolling Bell (D) 9618 Cottrell Terrace, Silver Spring, Md. 20903
Ida G. Ruben (D) 11 Schindler Court, Silver Spring, Md. 20903

DISTRICT 21–Prince George's County
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Pauline H. Menes (D) 3517 Marlbrough Way, College Park, Md. 20740
Andrew O. Mothershead (D) 5107 Berwyn Rd.,College Park,Md. 20740

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Charles J. Sullivan, Jr. (D) 7100 Baltimore Ave., College Park, Md. 20740

DISTRICT 23–Prince George's County
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Robert S. Redding (D) P.O. Box Z, Bowie, Md. 20715
Perry O. Wilkinson, Jr. (D) Suite 404, Presidential Bldg, 6525 Belcrest Rd., Hyattsville, Md. 20782

DISTRICT 24–Prince George's County
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Leo E. Green (D) 3123 Belair Dr., Bowie, Md. 20715
David G. Ross (D) P.O. Box Z, Bowie, Md. 20715

DISTRICT 25–Prince George's County
Nathaniel Exum (D) 5611 Landover Rd., Mitchell Bldg., Hyattsville, Md. 20705
Francis J. Santangelo, Sr. (D) 2nd Floor Mitchell Bldg,Cheverly,Md. 20784
Decatur W. Trotter (D) 3101 Polk Court, Glenarden, Md. 20801

DISTRICT 26–Prince George's County
B. W. Mike Donovan (D) 7112 Mason St., Dist.Hghts.,Md. 20028
Craig S. Knoll (D) 6108 Old Silver Hill Rd, Dist. Hgts, Md 20028
Lorraine M. Sheehan (D) 6108 Old Silver Hill Rd, Dist. Hgts, Md. 20028

DISTRICT 27–Prince George's County
Charles S. Blumenthal (D) Suite 302, 6192 Oxon Hill Rd, Oxon Hill, Md.20021
Frank J. Komenda (D) Suite 302, LFL Bldg.,6192 Oxon Hill Rd, Oxon Hill, Md. 20021
Frederick C. Rummage (D) 6300 Geo. Wash. Dr., Oxon Hill, Md.20031

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Joseph F. Vallario, Jr. (D) 6007 St. Barnabas Rd. Oxon Hill, Md. 20021
John W. Wolfgang (D) 7906 Old Branch Ave., Clinton,Md. 20735

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John Hanson Briscoe (D) State House, H-101,Annap.,Md. 21404
Royden P. Dyson (D) P.O. Box 5, Great Mills, Md. 20634
Michael J. Sprague (D) P.O. Box 314, Port Tobacco, Md. 20616

DISTRICT 30
Sub-District 30A–Calvert County
Thomas A. Rymer (D) Box 283, Prince Frederick, Md. 20678
Sub-District 30B–Anne Arundel County
Elmer F. Hagner, Jr. (D) 2511 Riva Rd., Annapolis, Md. 21401
Donald L. Rosenshine (D) 761-D Fairview Ave., Annapolis, Md. 21403

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John J. Fallon (D) 14 Park Dr., Pasadena, Md. 21122
William J. Helms, Jr. (D) 293 McKinsey Rd., Severna Park, Md. 21146

DISTRICT 32–Anne Arundel County
Tyras S. Athey (D) 214 LHOB, 6 Bladen St., Annap, Md. 21404
Franklin A. Thomason (D) 302 Sycamore Rd., Linthicum Heights, Md. 21090
Michael J. Wagner (D) 241 Wicklow Ave., Glen Burnie, Md. 21061

DISTRICT 33–Anne Arundel County
Patricia Aiken (D) 215 HOB, 6 Bladen St., Annapolis, Md. 21401
Robert R. Neall (R) P.O.Box 299, Davidsonville,Md. 21035
Elizabeth S. Smith (R) Rt. 2–Box 96C Harbor Hills, Davidsonville, Md. 21036

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Carter M. Hickman (D) Walnut Hill Farm, RFD, Church Hill, Md. 21623
Richard D. Mackie (D) Little Elk Farm, RD 8, Box 203,Elkton,Md.21921
R. Clayton Mitchell, Jr. (D) 405 LHOB, 6 Bladen St.,Annap., Md. 21404

DISTRICT 35–Caroline, Dorchester, Talbot and Wicomico Counties
John R. Hargreaves (D) Route 2, Box 44-L, Pealiquor Landing Rd., Denton, Md. 21629
William S. Horne (D) P.O. Box 204, Easton, Md. 21601
W. Henry Thomas (D) 1009 Radiance Dr., Cambridge, Md. 21613

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Joseph J. Long (D) 730 S. Park Dr., Salisbury, Md. 21801
Robert Charles Biggy Long (D) Box 216, Westover, Md. 21871
DISTRICT 37–Baltimore City
R. Charles Avara (D) 1314 Light St.,Balto.,Md.21230
Madeline Rutkowski (D) 314 Washburn Ave., Baltimore, Md. 21225
Paul E. Weisengoff (D) 555 Brisbane Rd., Baltimore, Md. 21229
DISTRICT 38–Baltimore City
Isaiah Dixon, Jr. (D) 1607 W. North Ave., Baltimore, Md. 21217
Lena K. Lee (D) 330 N.Charles St.,Room 415,Balto.,Md.21201
Larry Young (D) 2322 Lauretta Ave., Baltimore, Md. 21223
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Torrey C. Brown (D) 3941 Canterbury Rd., Baltimore, Md. 21218
Richard W. Emory, Jr. (D) 1100 Grace Bldg., 10 E. Balto. St.,Balto.,Md. 21202
William J. Madonna, Jr. (D) 211 W. 25th St., Baltimore, Md. 21211
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Troy F. Brailey (D) 2405 Baker St., Baltimore, Md. 21216
Lloyal Randolph (D) 3400 Woodbrook Ave., Baltimore, Md. 21217
Kenneth L. Webster (D) 2836 Oakley Ave., Baltimore, Md. 21215
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Walter R. Dean, Jr. (D) P.O.Box 11937, Balto.,Md. 21207
Pinkney A. Howell (D) 3301 Liberty Heights Ave.,Baltimore, Md.21215
Arthur G. Murphy, Sr. (D) 2914 Edmondson Ave.,Balto.,Md.21225
DISTRICT 42–Baltimore City
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Benjamin L. Cardin (D) 211 St. Paul Place, Baltimore, Md. 21202
Steven V. Sklar (D) 119 Cross Keys Rd., Baltimore, Md. 21210
DISTRICT 43–Baltimore City
Andrew J. Burns (D) 1027 Munsey Bldg., Baltimore, Md. 21202
Henry R. Hergenroeder, Jr. (D) 4901 Harford Rd.,P.O. Box 3682, Balto.,Md 21214
Joseph William Lanasa (D) 3803 Evergreen Rd., Baltimore, Md. 21206
DISTRICT 44–Baltimore City
Gerald J. Curran (D) 2530 N. Charles St., Baltimore, Md. 21218
Dennis C. McCoy (D) Suite 2803, 222 St. Paul St.,Balto.,Md.21202
Frank C. Robey, Jr. (D) 1218 Havenwood Rd.,Balto.,Md. 21218
DISTRICT 45–Baltimore City
Joseph A. Chester, Sr. (D) 3027 E. Federal St., Baltimore, Md. 21213
John W. Douglass (D) 1535 E. North Ave.,Balto.,Md. 21213
Hattie N. Harrison (D) 2721 Mura St., Baltimore, Md. 21213
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Edward J. Dabrowski, Jr. (D) 17 N. Highland Ave., Baltimore, Md. 21224
Charles J. Krysiak (D) 3307 Foster Ave., Balto.,Md. 21224
George J. Santoni (D) 3921 Lyndale Ave., Baltimore, Md. 21213
DISTRICT 47–Baltimore City
Raymond A. Dypski (D) 2824 Dillon St., Baltimore, Md. 21224
American Joe Miedusiewski (D) 625 S. Luzerne Ave., Baltimore, Md. 21224
Elmer Elmo Walters (D) 17 N. Curley St., Baltimore, Md. 21224

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All located in James Senate Office Building

(Numbers indicate legislative district)

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CLARENCE W. BLOUNT — 41
Vice-Chairman

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Tommie Broadwater, Jr.	25	Laurence Levitan	15
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Edward T. Hall	30	Charles H. Smelser	4

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Room 400 — 269-3573

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Chairman

NORMAN R. STONE, JR. — 9
Vice-Chairman

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John A. Cade	33	Arthur H. Helton, Jr.	6
Howard A. Denis	16	Donald P. Hutchinson	7

Staff — Richard Israel

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Thos. Patrick O'Reilly	23	E. Homer White, Jr.	36
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John P. Corderman	2	Margaret C. Schweinhaut	18

Staff — Stuart G. Buppert

Hearing schedules, House and Senate seating plans, and synopses of bills are available at the Legislative Information Desk in the State House basement.

HOUSE OF DELEGATES COMMITTEES

All located in House of Delegates Office Building

(Numbers indicate legislative district)

APPROPRIATIONS

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Chairman

R. CHARLES AVARA — 37
Vice-Chairman

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DeCoursey E. Bolden	1	R. Clayton Mitchell, Jr.	34
Joseph A. Chester, Sr.	45	Andrew O. Mothershead	21
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Marilyn Goldwater	16	J. Hugh Nichols	14
George E. Heffner	9	Frank B. Pesci, Jr.	23
Timothy R. Hickman	13	Dennis F. Rasmussen	7
Robert Anthony Jacques	17	Robert S. Redding	23
Nancy K. Kopp	16	Frank C. Robey, Jr.	44
Joseph W. Lanasa	43	David L. Scull	18
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Staff — Odell Smith

CONSTITUTIONAL AND ADMINISTRATIVE LAW

Room 141 — 269-3228

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Chairman

CHARLES J. SULLIVAN — 22
Vice-Chairman

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Bert Booth	11	Theodore Levin	12
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Thomas B. Cumiskey	1	Amer. Joe Miedusiewski	47
Gerald J. Curran	44	Donald B. Robertson	18
Edward J. Dabrowski	46	Donald L. Rosenshine	30
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Staff — Don Eveleth

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Nathaniel Exum	25	F. J. Santangelo, Sr.	25
John J. Fallon	31	George J. Santoni	46
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Joseph J. Long, Sr.	36	Casper R. Taylor, Jr.	2
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Louis P. Morsberger	13	Patrick T. Welsh	8
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ENVIRONMENTAL MATTERS

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Hugh Burgess	14	Daniel J. Minnick, Jr.	8
T. W. Chamberlain, Sr.	11	Catherine I. Riley	6
Julien P. Delphey	3	S. Frank Shore	17
Raymond A. Dypski	47	W. Henry Thomas	35
Royden P. Dyson	29	Judith C. Toth	15
Sheila K. Hixson	20	Michael H. Weir	7
Pinkney A. Howell	41	Larry Young	38
A. Wade Kach	11		

Staff — John Szymanski

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Arthur S. Alperstein	12	Lloyal Randolph	40
F. Vernon Boozer	10	David Gray Ross	24
Andrew J. Burns	43	Frederick C. Rummage	27
Joel Chasnoff	14	Madeleine Rutkowski	37
Elmer F. Hagner, Jr.	30	Thomas A. Rymer	30
V. Lanny Harchenhorn	4	Lorraine M. Sheehan	26
William S. Horne	35	Steven V. Sklar	42
Jerry H. Hyatt	15	Joseph F. Vallario, Jr.	28
Richard C. Matthews	5	C. Clifton Virts	3

Staff — Thomas C. Smith

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Raymond E. Beck	4	Thomas B. Kernan	10
Alexander B. Bell	20	Lucille Maurer	19
Troy Brailey	40	Howard J. Needle	12
William H. Cox, Jr.	6	George A. Price	5
Walter R. Dean, Jr.	41	Michael J. Sprague	29
Gerard F. Devlin	24	Decatur W. Trotter	25
John J. Garrity	22	Elmer Elmo Walters	47
William J. Helms, Jr.	31	Paul E. Weisengoff	37
H. R. Hergenroeder, Jr.	43	Eugene J. Zander	19
Russell O. Hickman	36		

Staff — Hank Whaley

AN APPEAL FOR GRASS ROOTS HELP. . .

Write on your personal or business *letterhead,* if possible, and sign your name over your typed signature at the end of your message.

Be sure your exact return address is on the letter, not just the envelope. Envelopes sometimes get thrown away before the letter is answered.

Identify your subject clearly. State the subject of the legislation you're writing about. Give the House or Senate bill number provided in the *Annapolis Agenda.*

State your reason for writing. Your own experience is your best supporting evidence. Explain how the issue would affect you, your business or profession—or what effect it could have on the State or your community.

Avoid stereotyped phrases and sentences that give the appearance of "form" letters. They tend to identify your message as part of an organized pressure campaign—and produce little or no impact.

Be reasonable. Don't ask for the impossible. Don't threaten. Don't say, "I'll never vote for you unless you do such and such." That won't help your cause, but may harm it.

Ask him to state his position in his reply. As his constituent, you're entitled to know.

The *timing* of your letter is *important.* Begin to encourage approval or disapproval of a bill, or to recommend that it be amended favorably, while it is in committee. Take your cue from the *Annapolis Agenda* on this. Your representatives usually can be more responsive to your appeal at that time than after a bill has already been approved by a committee. Of course, this isn't always the case. Don't give up because a bill is out of committee or through one house.

Thank him if he pleases you with his vote on an issue. Everybody appreciates a complimentary letter and remembers it. Legislators are no exception. *But if he votes contrary* to your position, don't hesitate to *let him know.* He will remember that, too.

LEGISLATIVE DISTRICTS

The state is divided, on the basis of population, into 47 legislative districts, each of which elects one senator and three delegates to the General Assembly. Some of the legislative districts cross county lines, particularly in the rural areas. Some legislative districts are sub-divided into three single-member or one single-member and one two-member delegate districts. (i.e. legislative districts 1, 2, 3, etc.)

In a legislative district containing more than two counties (or parts thereof), and which is not sub-divided, no county may have more than one delegate residing in it (i.e. legislative districts 34, 35, 36).

The Maryland
Pharmaceutical
Association

ASK YOUR PHARMACIST

MARYLAND LAW requires that in a pharmacy only a PHARMACIST or PHARMACY STUDENT under the supervision of a pharmacist may provide information to the public concerning drugs and medicines and their therapeutic values, potential side effects, and uses in the treatment and prevention of diseases.

YOU can receive this assurance ONLY in a PHARMACY.

INSIST ON YOUR RIGHT TO PROFESSIONAL ADVICE.

A History *(Continued from page 15)*

Upon the successful completion of the program, graduates have always been eligible to take state examinations for licensure. For the scholastically able student, various programs also trained men and women for many positions in applied and research areas of pharmacy.

From the beginning the school has made many noteworthy contributions to the advancement of pharmacy and is one of the trail-blazers in this field. Alpheus Phineas Sharp, one of the first graduates in the class of 1842, read the first scientific paper entitled "On the Strength of Commercial Muriatic and Nitric Acids and Alcohols" before the American Pharmaceutical Association in New York City (1855). Merck, Sharp and Dohme can trace its origin to the 1845 opening of his apothecary shop in Baltimore.

In addition to the first separate professorship in the theory and practice of pharmacy (1844), some other "firsts" include an obligatory course in analytical chemistry (1872), a separate course in prescription compounding (1900), a full-time Pharmacology Department (1930), as well as professorships in these areas.

In 1870, the college called the first convention of representatives of pharmacy schools to formulate uniform standards for the graduation of students. The convention was held in Baltimore at the Maryland College of Pharmacy and was the forerunner of the present American Association of Colleges of Pharmacy.

From the very beginning the school made many noteworthy contributions to the advancement of pharmacy. Today's effective local laws for drug control are an outgrowth of efforts by early faculty members of the college. Pharmacy laws initiated and fostered were the first law to regulate the practice of pharmacy in Baltimore City (1868) and the state-wide law (1902). In 1910, the legislature provided for the appointment of a food and drug commissioner and the first one was Charles Caspari, Jr. (first dean of the College of Pharmacy).

The first meeting of the American Council on Pharmaceutical Education was held in Baltimore in 1932, following efforts by the dean of the school to establish this first accreditation body for schools of pharmacy. The post office and principal business office address of the Council was the School of Pharmacy (32 South Greene Street). The council was incorporated August 12, 1939 under the general laws of the State of Maryland. Dean Andrew G. Dumez served on the Council as secretary-treasurer (1932-48) and Past-Dean E. F. Kelly was president of the organization (1932-44).

Beginning with the school session of 1928 graduate courses were outlined and this inaugurated a graduate work era of high grade which added much to the development and prestige of the school. The first recipients of the M.S. degree (1930) were John C. Bauer, William P. Briggs and Frank J. Slama. On June 3, 1933 the first Ph.D. degrees were awarded to John C. Bauer and Noel E. Foss.

The Maryland College of Pharmacy and the University of Maryland School of Pharmacy provided nine presidents of the American Pharmaceutical Association from 1856-1940; two general secretaries of the Association, one from 1894-1911 and the second from 1925-44; and thirteen deans in schools of pharmacy.

The school revised its baccalaureate program in 1969 to include a six months professional experience program within the final fifth year. These clinical-type clerkships which take place in selected community and institutional pharmacies throughout the state, are accepted by the Maryland Board of Pharmacy in lieu of its traditional internship requirements. Although the question of adequate control of practical experience as a part of a well balanced pharmaceutical education had been given much study throughout the country for many years, Maryland became the first state to eliminate the nonstructured internship. In a sense, the age-old concept of an apprentice working under the personal supervision of an experienced practitioner has been revived and modernized.

Historically, pharmacy has been a clinically related profession. In 1975, a six-year program (Pharm.D.) was instituted to complement and enhance the baccalaureate program. The primary function of the graduate of this program is to perform a clinical therapeutic service to patients and health professionals. The recipients of this professional degree (Doctor of Pharmacy) will also be capable of other roles including that of an educator in pharmacy and other health-related programs.

The Maryland College of Pharmacy was a membership institution and the officers were elected. There were thirteen presidents of the college from the time of organization to several years after the amalgamation as a department of the Medical School of the University. With the change in organization from that of an independent institution to a unit of a University, the office of president was abolished and a dean was appointed to assume the responsibilities of the principal administrative officer.

MARYLAND COLLEGE OF PHARMACY

Presidents

1840-42	Thomas G. Mackenzie
1842-44	Benjamin Rush Roberts
1844-71	George W. Andrews
1871-72	J. Brown Baxley
1872-73	J. Faris Moore (1847)
1873-75	John F. Hancock (1860)
1875-88	Joseph Roberts
1888-90	Edwin Eareckson
1890-91	William S. Thompson (1842)
1891-97	Louis Dohme (1857)
1897-1906	Charles E. Dohme (1862)
1906-07	Henry A. Elliott
1907-08	Charles H. Ware (1886)

Dean of Faculty

1896-1904	Charles Caspari, Jr. (1869)

DEPARTMENT OF PHARMACY

(after merger with the University of Maryland in 1904)

Deans of Faculty

1904-17	Charles Caspari, Jr.*
1917-18	Daniel Base
1918-20	Evander F. Kelly (1902)

SCHOOL OF PHARMACY

(after consolidation of the University of Maryland with the Maryland State College of Agriculture at College Park)

Deans

1920-26	Evander F. Kelly
1926-48	Andrew G. DuMez*
1948-49	B. Olive Cole (1913)**
1949-68	Noel E. Foss
1968-	William J. Kinnard, Jr.

* Died in office
**Acting

(NOTE: Figure in parentheses following name indicates year of graduation from Maryland College of Pharmacy or University of Maryland.)

Brief Biographical Notes on Deans

Charles Caspari, Jr. (1850-1917) was born in Baltimore and grew up in the atmosphere of his father's pharmacy on the west side of Gay Street north of Fayette Street. In 1865 he was an apprentice in an apothecary shop at Pratt and Howard Streets. His preceptor was Louis Dohme, one of the founders of the firm of Sharp and Dohme. Upon the death of his father in 1870, he became the proprietor of the drug store on Gay Street. He later operated a store at Carey Street and Harlem Avenue and also one at 800 West Baltimore Street, northwest corner of Fremont Avenue (until 1891). His home address for many years was 1129 Harlem Avenue, a typical large Baltimore three-story rowhouse. In 1905 he was awarded the honorary degree of Doctor of Pharmacy (Pharm.D.) by the University of Maryland for his long distinguished career and contributions to his profession. The career of Charles Caspari was intimately connected with the progress of modern pharmacy in the United States. He was General Secretary of the American Pharmaceutical Association (1894-1911), Food and Drug Commissioner of Maryland (1910-17) and member of three National Formulary Committees (1888-1906). He was the author of five editions (1895-1916) of his own textbook "Treatise on Pharmacy" and one of the editors (1895-1916) of the "National Standard Dispensatory".

Daniel Base (1869-1926) was born in Baltimore and obtained his elementary and secondary education in the public schools. He graduated from the Baltimore City College (a high school) in 1888. In the fall of the same year he won a scholarship (in competitive examination) and entered Johns Hopkins University, then located on Howard and Centre Streets. He graduated in 1891 with the degree of A.B. Again he won a scholarship and continued his studies with chemistry as a major subject and received his Doctor of Philosophy Degree in 1895. In the fall of the same year, he became a faculty member of the Maryland College of Pharmacy and this association continued until 1920. During his connection with this institution, he contributed materially to the literature, through his authorship of "Elements of Vegetable Histology" (third edition appeared in 1912), and many revisions of "Simon's Manual of Chemistry" (eleventh edition published in 1916). For many years the chemistry publication had been a favorite work with the pharmacists of this country and regarded as being the last word in the field. For several years he acted as secretary of the faculty and also treasurer. For many years while associated with the College he resided at 329 North Schroeder Street with his parents (this is within easy walking distance of the Baltimore Campus). In 1920 Dr. Base stopped teaching and became the research chemist of the firm of Hynson, Wescott and Dunning. During this time he furthered the progress of the well known drug, Mercurochrome; prepared several interesting and important organic antimony compounds; and was also responsible for the compilation of the compound Benzyl Mandelate.

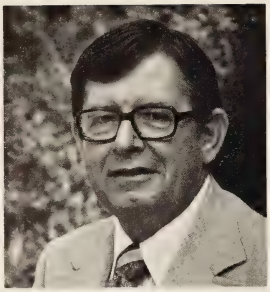
Evander F. Kelly (1879-1944) was born in Carthage, North Carolina. After working in several pharmacies (including one in Green Cove Springs, Florida) he enrolled in the Maryland College of Pharmacy on Aisquith Street and graduated with the Doctor of Pharmacy degree in 1902 (with honors). Upon graduation he worked on the staff of the Sharp and Dohme Manufacturing Firm, southwest corner Howard and Pratt Streets, where he advanced steadily to the position of superintendent until 1911 when he resigned to devote his time to the Pharmacy School. He was the first pharmacist lecturer at the Johns Hopkins School of Medicine (1917-44) and also the first pharmacist to be a member of the Maryland State Department of Health (1920-44). In 1926 he was elected General Secretary of the American Pharmaceutical Association, a position which he occupied until 1944. The headquarters offices of this Association were located at 10 West Chase Street in Baltimore for eight years (1926-34).

Due in large measure to his persistent prodding, Maryland enacted legislation requiring all practicing pharmacists to be college graduates. Among the many offices and memberships that he held, Dr. Kelly was also Secretary of the Maryland Pharmaceutical Association (1907-42). In 1933 he was awarded the Remington Medal, the highest award in the field of pharmacy, and the same year he was given an honorary Doctor of Science Degree by Temple University. He revised several times Caspari's popular book "Treatise on Pharmacy" and the last edition appeared in 1939. During a one-year period (1940-41) he was also the first editor of the Practical Edition, Journal of the American Pharmaceutical Association. In 1940 the American College of Apothecaries was organized and Dr. Kelly was a charter member. During the early 1900's he resided in Baltimore at 330 North Charles Street and 302 Edgevale Road, Roland Park. He then

(Continued on page 23)

The straighter they talk, the better things get.

Fred M. Eckel, R.Ph., Assoc.
Professor of Hospital Pharmacy
Chapel Hill, N.C.



Sam McConnell, Jr., R.Ph.
Community Pharmacist
Scottsdale, Arizona

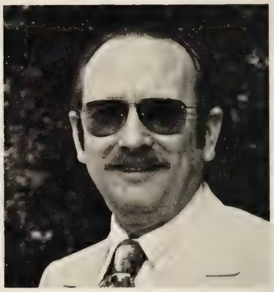
John Spicer, R.Ph.
Community Pharmacist
Fowler, Michigan

Al Rosica, R.Ph
Community Pharmacist
Cherry Hill, New Jersey

Don F. Gould, R.Ph., Chairman
of the Board, Gould Drug Company
Mt. Pleasant, Michigan

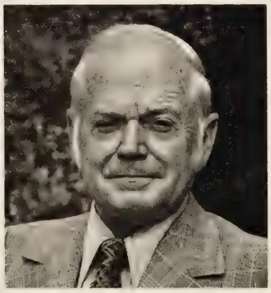
Bill H. Hotaling III, R.Ph. Director
of Pharm. Services, Children's Hosp.
National Medical Center, Wash., D.C.

Newell Hall, R.Ph., V.P. and Director
of Prof. Relations, Hook Drugs, Inc.
Indianapolis, Indiana



Taylor H. Jobe, R.Ph.
Community Pharmacist
Gladewater, Texas

Tom C. Sharp, Jr., R.Ph.
Exec. Sec., Tennessee Pharm. Assoc.
Nashville, Tennessee



Lawrence C. Weaver, Ph.D., Dean
College of Pharm., Univ. of Minnesota
Minneapolis, Minnesota

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A History *(Continued from page 21)*

lived for many years near Cockeysville, Maryland in a large house called Montrose that once had been owned by the Cockey family. In 1953 the Kelly Memorial Building (650 West Lombard Street) was dedicated in his honor.

Andrew G. DuMez (1885-1948) was the son of a pharmacist, receiving his motivation and practical training in pharmacy from his father's drug store. Born in Horican, Wisconsin, he obtained his general education in the public schools and then attended the University of Wisconsin where he graduated in pharmacy (Ph.G.) in 1904. The following year he was appointed instructor in Pharmaceutical Chemistry at the University, a post he held until 1910. During this period he acquired the Bachelor of Science and Master of Science Degrees. He then taught at Pacific University (Oregon) and the next year at Oklahoma Agricultural and Mechanical College. From 1912-16 he served as Director of the School of Pharmacy at the University of the Philippines. While in the Islands, he first produced an "Emetine-Bismuth-Iodide" compound for use in the treatment of amebic dysentery. Upon returning to the United States, he accepted a fellowship at the University of Wisconsin, earning a Doctor of Philosophy Degree in 1917. At that time an appointment to the U.S. Public Health Service took him to Washington, D.C. Dr. DuMez left the federal service in 1926 to accept his post at the School of Pharmacy. While with the government and then the school he authored many pharmaceutical publications and his editorial contribution to pharmacy was a significant one. He guided the school to a position which was the equal of or the superior of any other pharmacy school in America. Under his leadership graduate education was instituted and encouraged. He sponsored the reorganization of the Alumni Association and this greatly increased the interest of the alumni and aroused a new spirit of fellowship and cooperation.

B. Olive Cole (1883-1971) was born in Mount Carmel, Baltimore County, Maryland. She graduated from Franklin High School (Reisterstown, Maryland) in 1902 and then attended Baltimore Business College. She began her career with the drug manufacturing firm of Sharp and Dohme when it was located in Baltimore. As a result, Miss Cole entered the University of Maryland, receiving the degree of Doctor of Pharmacy in 1913. After graduation she was employed by a pharmaceutical manufacturing company in Washington, D.C.

In 1920 Miss Cole joined the staff of the School of Pharmacy serving as Secretary of the Faculty for more than a quarter of a century. In addition, she taught botany, materia medica, economics, pharmaceutical law and administration courses. During her long professional career, Dr. Cole was very active in pharmaceutical associations and she wrote a number of articles on economics and related areas, as well as on Maryland pharmacy history.

Dr. Cole was well known to hundreds of pharmacists not only in Maryland but in other parts of the country. Among her many unique "firsts-for-women" are: first woman to receive a law degree from the University of Maryland (1923), first woman dean in a pharmacy school (1947), honorary president of the Maryland Pharmaceutical Association (1951), honorary president of the Alumni Association School of Pharmacy (1953), recipient of the Honored Alumnus Award (1953), and the only woman member of the Baltimore Veteran Druggists' Association (1949).

In 1966 the B. Olive Cole Pharmacy Museum was established in the Kelly Memorial Building adjoining the present school of pharmacy. The American Institute of the History of Pharmacy, in 1970, conferred its Certificate of Commendation upon Dr. Cole for her activity over the years in fostering attention to the profession's history and dedicated service to humanistic values in Pharmacy.

Noel E. Foss (1906-   ) was born at Henry, South Dakota. He received his undergraduate training at the South Dakota State College where he was awarded the Pharmaceutical Chemist (Ph.C.) and Bachelor of Science in Pharmacy (B.S. in Pharm.) degrees in 1929. Following his employment in retail pharmacy at Hot Springs, South Dakota he was awarded the first H. A. B. Dunning research fellowship offered by the School of Pharmacy, University of Maryland and received the Master of Science (1932) and Doctor of Philosophy (1933) degrees.

From 1934-37, Dr. Foss was professor of Pharmacy at Duquesne University (Pittsburgh). He obtained a wealth of industrial experience while employed (1937-42) at Burroughs, Wellcome and Company (New York). He served his country from 1942-46 in the U.S. Army Medical Purchasing Office, St. Louis, Missouri and New York City; and was also on special assignment to France and Germany. At war's end (1946-47) he was Technical Director of the Pharmaceutical Department Calco Chemical Division of American Cyanamid Company (New Jersey). He was appointed Assistant Dean of the University of Illinois College of Pharmacy (1947-49).

Dr. Foss authored, or co-authored, more than twenty-five publications relating to numerous pharmaceutical subjects and his professional activities included state and national organizations.

Dr. Foss strove conscientiously to advance pharmacy and during his tenure as Dean, a new building (Dunning Hall) was erected for the school, a number of young and dynamic faculty members were added to the staff, the curriculum was revamped and revised along true educational lines, first refresher course for retail pharmacists (continuing education), and the model pharmacy was established in Dunning Hall.

In 1970, the Board of Regents, acting upon the recommendations of the faculty, awarded him the title of Dean Emeritus.

(Continued on page 30)

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A Tribute *(Continued from page 17)*

the late Dr. Andrew G. DuMez for whom he had great admiration and respect." Is this anything short of Lincolnesque? Listen for a moment to an excerpt of Lincoln's Second Inaugural address, "With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in; to bind up the nation's wounds; to care for him who shall have borne the battle, and for his widow, and his orphan — to do all which may achieve a just and lasting peace among ourselves, and with all nations."

Robert Frost must have had someone like Frank in mind — a person who constantly subordinated his own convenience and pleasures in order to minister to the needs of others — when he wrote:

"The woods are lovely, dark, and deep;
But I have promises to keep
And miles to go before I sleep.
And miles to go before I sleep."

After graduating and before going into the Service, Frank worked as an analytical chemist at Standard Pharmaceutical Corporation and, for a while, as general manager of Yager Drug Company. After the War, he resumed his work at Yager's and his warm association with Mr. Edward E. Murray, eventually being promoted to the vice presidency of the company. Later, for a five-year period, Frank owned and operated a community pharmacy in Overlea. In 1955, he was appointed Chief of the Division of Drug Control, Maryland State Department of Health — following the footsteps of two outstanding predecessors, Robert L. Swain and L. M. Kantner. During this period, Frank also served as Commissioner and Secretary-Treasurer of the Maryland Board of Pharmacy and later as Acting Director of Consumer Health Protection.

Frank's outstanding record in drug control was recognized in 1965-66 when he served as president of the National Association of Boards of Pharmacy. Well-deserved recognition also came to Frank in the form of awards: the School of Pharmacy Honored Alumnus Award — the Merit Award from the Central Atlantic States Association of Food and Drug Officials of the United States — and, in 1971, the nation's highest award for food, drug, and cosmetic law enforcement officers, the Harvey W. Wiley Award.

Truly Frank has left a rich heritage to his many friends and associates in his *example* of a life of service to others. However, not his example alone, but also his *precept* is a legacy of which each of us is challenged to be a faithful steward. He said, "Let us then each renew our dedication, let us each contribute what we can to better our profession and to serve the public welfare to the best of our ability, let us each give a true gift, a portion of ourself, to better the future of mankind."

The addresses of Frank E. Kunkel and Dr. Robert K. Chalmers will appear in subsequent issues of THE MARYLAND PHARMACIST

Baltimore Metropolitan Pharmaceutical Association

The Baltimore Metropolitan Pharmaceutical Association held its annual meeting at the New Howard Hall addition of the University of Maryland Baltimore Campus on November 18 following the First Balassone Memorial Lecture.

The feature was the election of officers with Stanley J. Yaffe, President-Elect assuming office as president for 1977. Elected to the Executive Committee for 2 year terms were: Joseph W. Loetell, Marvin L. Oed and Mrs. Oscar (Norma) Schapiro. Re-elected was Richard E. Myers and completing terms are: Elwin H. Alpern, Barry L. Bloom, James B. Culp, Jr. and Bernard N. White.

Officers' reports were presented by outgoing president Lubman, Treasurer Spigelmire and Executive Director Nathan I. Gruz. The Membership Committee report was given by Elwin Alpern who discussed plans for membership enrollment in the coming year. The 1976 total membership was 10 more than 1975. Milton Sappe, Chairman of the Banquet, reported on the affair. Marvin Friedman, Chairman of the Prescription Insurance Programs presented an update on Medicaid, status of cost survey and HMO problems.

Following the presentation of a slate by the Nominating Committee there being no further nominations, the slate was adopted unanimously. Charles E. Spigelmire installed the officers and executive committee.

Victor Morgenroth suggested that a resolution be presented by BMPA to the MPhA House of Delegates regarding relations of Environmental Health Administration and its administrator to the Board of Pharmacy. Executive Director Gruz requested agenda items to be suggested to BMPA for presentation to the MPhA House of Delegates. He also requested that information regarding conduct of inspections by Division of Drug Control be reported to the office.

Loewy President Chairs National Committee

Philip Levin, president of Loewy Drug Company (Spectro), chaired the meeting of the Government Relations Committee for the National Wholesale Druggists' Association. His committee met to discuss MAC, National Health Insurance, FDA recall policies and procedures, and current product liability problems.

Mr. Levin is an affiliate member of the Maryland Pharmaceutical Association.

(Continued on page 27)

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News *(Continued from page 25)*

Standard Prescription Form Effective April 1st for Claims

As a result of extensive research and development by a Claim Form Subcommittee of the Drug Ad Hoc Committee, third party groups will begin use of a Standard Prescription Drug Claim Form on April 1, 1977. The following organizations have committed themselves to use the form: PCS, PAID Prescriptions, Aetna, Metropolitan and Travelers Insurance Companies. The form has been endorsed by the Blue Cross Association of America and will carry the symbol of the Health Insurance Association of America (HIAA), signifying that the form has been approved by the nation's health insurance industry. The required volume for the first year's use of the form has been estimated at 100 million. The forms will be printed by Moore Business Forms Company and distributed to the nation's drug wholesalers. Pharmacies will obtain the forms from the wholesalers and will, in turn, be paid for each form submitted by the appropriate administrator, underwriter or sponsor of the program. This long-awaited development is a significent step forward in easing the burden of third-party claims processing for the nation's pharmacists.

NDC Rejections

In order to avoid rejections, please pick up the NDC number exactly as it is written on the labels — do not rely on NDC numbers printed in trade publications or use the product numbers. Example: We recently noted the NDC number for Slow-K was incorrectly printed in a trade publication. The correct number is: 0083-0165-30.

PCS has requested that drug codes for compounded prescriptions be omitted. Just list the ingredients on the bottom line of the claim form in the box marked "Medication Name and Dosage Form" and leave the drug code box blank.

CPS

Complimentary Prescription Service (CPS) has grown tremendously since its inception in 1971. The concept, developed as an alternative to physical samples, has already been endorsed by 14 state pharmaceutical associations, including MPhA, and continues to add participating manufacturers and new products to their programs. The program reimburses the pharmacist his "usual and customary" amount for handling the distribution of companies' samples.

Pharmacists should express their views about the CPS program to manufacturers and physicians by using complimentary prescriptions.

(Continued on page 31)

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New MPhA Members

The following is a list of new members of the Maryland Pharmaceutical Association approved by the Board of Trustees for the period from March 1976 to January 1977.

Lawrence Appel, Reandallstown
Deborah Arbogast, Adelphi
Pablo Atienza, Baltimore
Douglas Behrens, Glen Burnie
Abrian Bloom, Baltimore
Anne Boucher, Beltsville
Michael Burns, Laurel
Donald Ceccorulli, Frederick
Peter Chan, Silver Spring
David Chin, Baltimore
Lily Chua, Baltimore
Paul Cuzmanes, Reisterstown
Anne Eggers, Silver Spring
Vincent Fabiano, Glen Burnie
CDR Raymond Farkas, Rockville
Richard Fry, Alexandria, Va.
Frank Gammino, Mitchellville
Mark Golibart, Baltimore
nancy Gehauf, Cumberland
Abraham Glaeser, Baltimore
Aaron Grebow, Baltimore
Richard Greenberg, Baltimore
John Gregory, Rockville
George Groleau, Baltimore
Gary Haas, Keedysville
Mark Hawes, Frederick
Linda Houchin, Laurel
Dennis Igoe, Ellicott City
Paul Jarosinski, Watertown, Mass.
Myles Kaye, Silver Spring
Miriam Kaminitz, Baltimore
Michael Kesselman, Baltimore
Barbara Kirby, Hyattsville
Michael Labat, Maplewood, New Jersey
Nicole Lembke, Bowie
Irving Levy, Annapolis
Louis Lindenbaum, Linthicum
Judy Lyon, Bel Air
Francis McGinity Jr., Baltimore
John Moss, Baltimore
Thomas Murray, Baltimore
Roger Musser, Baltimore
Irene Nowosiwsky, Rockville
Glenda Ownes, Beltsville
Pamela Perza, Gaithersburg
Christos Petropoulos, Baltimore
John Rapier, Gaithersburg
Sanford Rosenbloom, Baltimore
Christopher Shawyer, New Orleans
Leslie Silverberg, Baltimore
Rose Smith, Cumberland
Adesino Sobanjo, Baltimore
Carol Solt, Frederick
Theodore Sophocleus, Linthicum
Irving Sowbel, Stevensville
Richard Swenton, Morningside
Sandra Turney, Bowie
L. Suzann Wheatley, Olney
Kenneth Whittemore, Laurel
Paula Wolfe, Baltimore

Simon Solomon Pharmacy Economics Seminar

The Maryland Pharmaceutical Association conducted its annual Simon Solomon Pharmacy Economics Seminar on November 4 at the Quality Inn, Towson. Chairman Kenneth S. Sumida opened the day's proceedings, and Melvin N. Rubin, President of MPhA brought greeings to those attending the seminar which focused on the entrepreneur in pharmacy and the various factors involved in opening, buying or expanding one's pharmacy. Joining the chairman in developing this theme was keynote speaker Paul A. Pumpian, President of Ketchum Marketing Services, Inc. Mr. Pumpian emphasized the need for sound business principles as the cornerstone of survival for independent pharmacy. A panel discussion followed which reinforced Mr. Pumpian's thoughts by reviewing the purchasing alternatives available to the pharmacy owner in the Baltimore-Washington area. The panel consisted of Joseph J. Hugg, Retailer Services Representative, Henry B. Gilpin & Company; Harrison L. Leach, Vice President for Retailer Services, Care Drug Centers; Kenneth L. Mills, Sales Manager, Calvert Drug Company; Allan Posner, Sales Manager, Loewy Drug Company; Paul A. Pumpian; and Stanley J. Yaffe, President, AID Drug Stores.

The luncheon session was presided over by Nathan I. Gruz, Executive Director of MPhA, who introduced the luncheon speaker, William E. Woods, newly elected Executive Director of NARD. This position of national prominence gave added significance to his topic: "The National Scene — What's the Outlook for Independent Pharmacy?"

The afternoon session highlighted two speakers whose concern was in helping the pharmacist obtain the maximum return on his investment. Ted Gladson, Design and Merchandising Consultant to NARD and President of PE Systems, Chicago, gave a slide presentation with considerable documentation on ways to increase your front-end profits. Robert H. Allen, President of Medical Equipment Unlimited, Division of Spectro, discussed the financial and professional reasons for establishing or expanding a Medical Support and Equipment Department.

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Luncheon speaker William E. Woods. Executive Director. NARD. second from left with (right to left) Seminar Chairman Kenneth Sumida. MPhA President Melvin Rubin and Executive Director Nathan Gruz.

Keynote speaker Paul Pumpian, third from right; with (left to right) panelists Kenneth Mills, Richard Parker, Stanley Yaffe, Allan Posner, Kenneth Sumida, Harrison Leach and Joseph Hugg.

Seminar speakers Robert H. Allen (left) and Ted Gladson (right) with Chairman Kenneth Sumida.

A History *(Continued from page 23)*

William J. Kinnard, Jr. (1932-) was born in Wilmington, Delaware and earned his Bachelor of Science in Pharmacy (1953) and Master of Science (1955) degrees from the University of Pittsburgh and the Doctor of Philosophy (1957) degree from Purdue University. His graduate degrees were in pharmacology and his research interests, as reflected in many scientific publications, center on the neurophysiological, behavioral and cardiovascular aspects of pharmacology.

Dr. Kinnard, in the tradition of Maryland deans, led the school to national prominence again with a restructured patient oriented undergraduate curriculum, and the Professional Experience Program and a Pharm.D. program. At the present time Dr. Kinnard is also dean of the Baltimore Campus Graduate School, chairman of the United States Pharmacopeia Board of Trustees and President of the American Association of Colleges of Pharmacy. Because of his direct interest and very active role, the following are in existence today in the School of Pharmacy: Maryland Poison Information Center, Drug Abuse and Consumer Education Program.

APhA Announces 1979 Convention Site

Anaheim, California has been selected as the host city for the 1979 Annual Meeting of the American Pharmaceutical Association at a recent meeting of the Association's Board of Trustees.

The meeting will be held April 21-26, 1979, with exhibits to be held in the Anaheim Convention Center, April 22-25. Official hotels include the Disneyland, Sheraton-Anaheim, Inn at the Park, Quality Inn, Grand, Holiday Inn, Hyatt House, Howard Johnson and the Jolly Roger.

The 126th Annual Meeting will mark the first time that the Association has met in this Southern California city. Although best known for the Magic Kingdom of Disneyland, other attractions in this sunny, family vacationland include the Mission of San Juan Capistrano and Knott's Berry Farm.

As previously announced, the 1978 APhA Annual Meeting will be held May 13-18, in Montreal, Canada, while the upcoming 1977 Annual Meeting will be held in the "Big Apple" — New York City — May 14-19.

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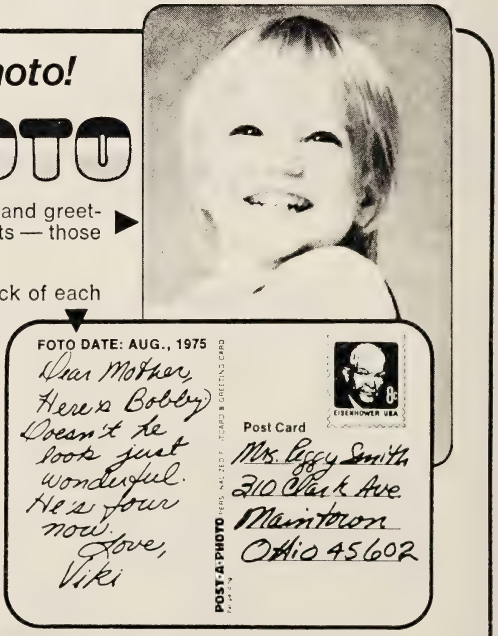

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News *(Continued from page 27)*

Prince Georges-Montgomery County Pharmaceutical Association

The Prince Georges-Montgomery County Pharmaceutical Association Meeting was held November 23, 1976 at the Sheraton-Silver Spring Motor Inn Hotel. President Henry W. Theis, Jr. presided. The featured speaker was Delbert D. Konnor, Pharm. M.S., Staff Coordinator for Voluntary Compliance, Drug Enforcement Administration. Mr. Konnor described the efforts made by his agency to develop better lines of communication with practicing pharmacists. To effect this policy, he cited numerous committees and departments headed by pharmacists who can better understand the needs and problems of the profession. A spirited question and answer period followed.

Immediately following, Nathan Gruz, Executive Director of MPhA, discussed the recent change in procedure by the Maryland State Department of Health and Mental Hygiene's Division of Drug Control in its inspection of pharmacies.

MPhA Radio Program Establishes Record

On November 22, 1959, WCAO radio introduced to its listening audience the Maryland Pharmaceutical Association public service program, "Your Best Neighbor", with its host, Charles Spigelmire. Both the series and host have survived the test of time, as "Your Best Neighbor" is the longest weekly continuous public service broadcast on WCAO. The show is presently aired on Sunday, 5:00 a.m. on WCAO AM (60.0 on the dial) and Wednesday, 3:30 p.m. on WCAO FM (92.0 on the dial).

Spanning the eighteen years and over 850 broadcasts, this program has promoted the pharmacist as a professional upon whom the general public can depend for its health care needs. In addition, many programs have featured special guests who relate timely information in their area of expertise, e.g. Diabetes Detection Week, Poison Prevention Week, Drug Abuse Committees and others.

Toronto Group Visits School of Pharmacy

A delegation from the College of Pharmacy in Toronto recently reviewed and observed the Professional Experience Program at the University of Maryland School of Pharmacy. The program, initiated in 1969, is the prototype in the nation for incorporating student externship within the structured five-year curriculum. The visitors from Toronto, including the dean of the college, a senior student, and state board members, hope to implement a similar program at their institution in the near future.

(Continued on page 32)

obituaries

SAUL REITER

Saul Reiter, 62, who had operated several pharmacies in the suburban Washington area spanning 35 years, died December 9. He had been a member of Prince Georges-Montgomery County and Maryland Pharmaceutical Associations.

Mr. Reiter was born in Brooklyn, New York and attended Columbia University School of Pharmacy. He came to the Washington area in 1934, and operated Alaska Pharmacy and Brightwood Pharmacy in Washington until ten years ago. Since 1966 he had owned Hospital Pharmacy Center in the University Nursing Home in Silver Spring.

Mr. Reiter was a member of the Washington Bridge Club and a life master in the American Bridge League.

A 32nd degree Mason, he belonged to the Cornerstone Lodge and Almas Temple, and was a charter member of the Temple Shalom Synagogue.

He is survived by his wife Jean, his son Robert, his daughter Marcia MacLeod, a brother and three sisters.

SOLOMON MILLER

Solomon David Miller, who had owned several pharmacies in the Baltimore area, died December 9, 1976 at the age of 60. Mr. Miller, a native of New York, was a member of the 1937 graduating class of the University of Maryland School of Pharmacy.

PHILIP C. BAER

Philip C. Baer, 96, a partner for many years in the drug firm of Morgan and Millard, and former proprietor of several pharmacies in Baltimore, died December 31, 1976.

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Maryland Pharmacist
650 West Lombard Street
Baltimore, Maryland 21201

News (Continued from page 31)

Gilpin Announces New Appointments

The Henry B. Gilpin Company announced the appointments of three new members to its wholesale drug operation. Louis Gatto has assumed the position of Director of Merchandising. Prior to this appointment, Mr. Gatto served as Director of Franchise Operations for Sentry Drug Centers, Inc.

Douglas L. Thompson, formerly of McKesson & Robbins Drug Company, has joined Gilpin Wholesale Drug Company as Vice-President of Operations.

Wendell M. Norwood has been appointed Vice-President of Sales. Prior to coming to Gilpin, Mr. Norwood was National Sales Development Manager for McKesson and Robbins Drug Company.

Upper Bay Pharmaceutical Association

The December meeting of the Upper Bay Pharmaceutical Association was held at Bush River Yacht Club on the fifteenth of the month at 10:15 p.m.

Elections were conducted and the 1977 officers were announced: Jonas J. Yousem, President; John W. Conrad, Jr., 1st Vice President; James L. Ter Borg, 2nd Vice President; Charles V. Bernard, Secretary; and Barbara C. Barron, Treasurer. The Executive Committee consists of Don L. Bradenbaugh of Harford County, and David H. Ayres of Cecil County.

The guest speaker was Walter Donnellon, Chief of Labor Relations for Procter & Gamble. Mr. Donnellon discussed his role as an arbitrator in industrial relations and the applicability of this role to the many problems facing pharmacy today.

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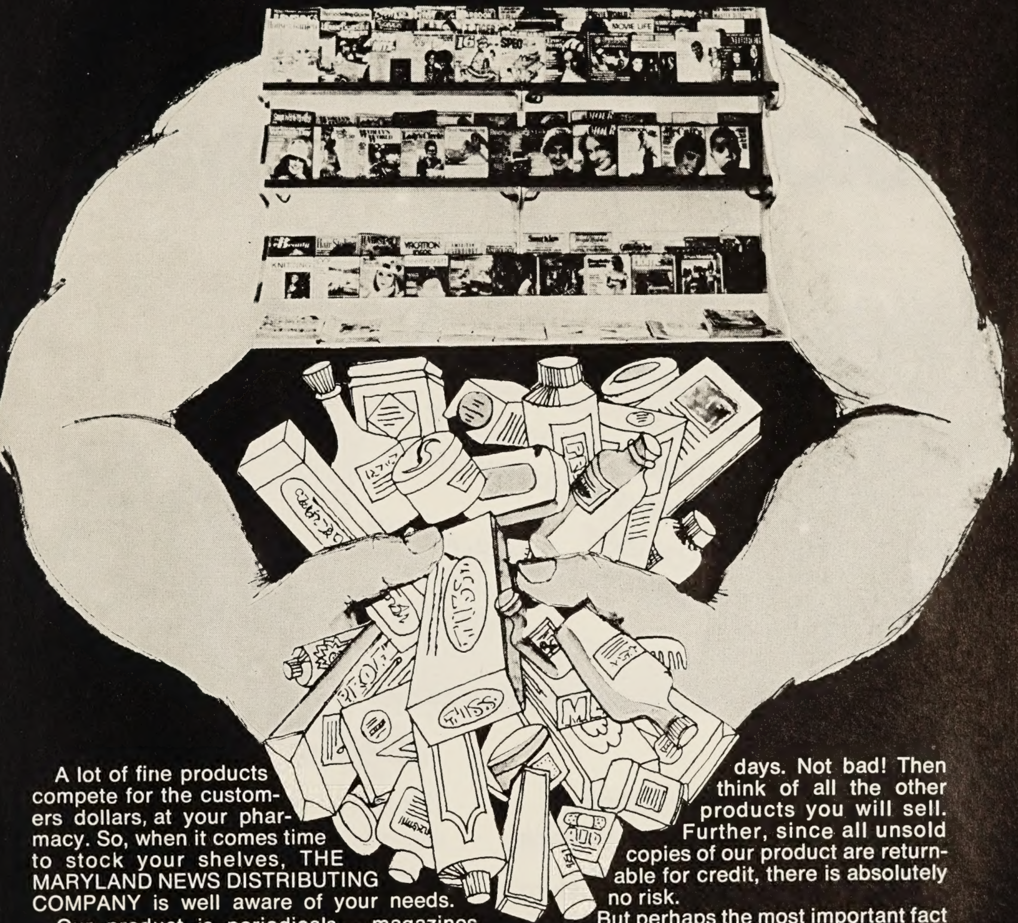

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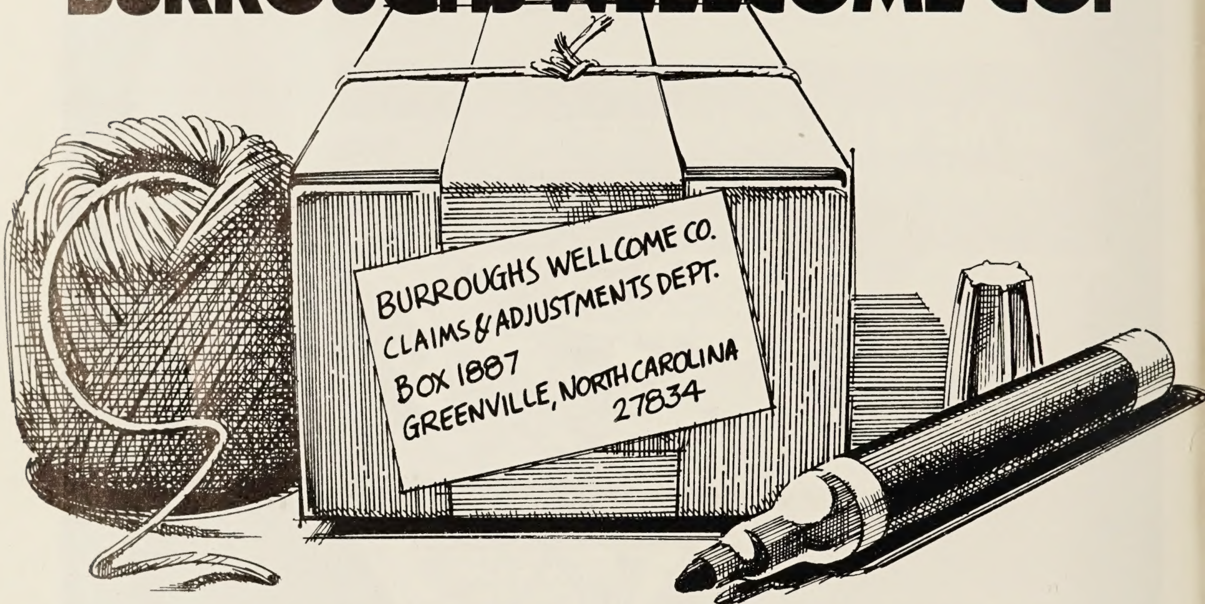

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